

TA-F311R/F411RA

SERVICE MANUAL

AEP Model
TA-F311R

AEP Model
UK Model
TA-F411RA



photo: TA-F411RA

For Service Manuals Contact
MAURITRON TECHNICAL SERVICES
8 Cherry Tree Rd, Chinnor
Oxon OX9 4QY
Tel: 01844-351694 Fax: 01844-352554
Email: enquiries@mauritron.co.uk

SPECIFICATIONS

Amplifier

Continuous RMS power output (both channels driven simultaneously)

		TA-F311R	TA-F411RA
DIN, 1 kHz	4 ohms 8 ohms	40 W + 40 W	70 W + 70 W
20 Hz - 20 kHz THD 0.05%	8 ohms	30 W + 30 W	50 W + 50 W

Input

Input jack	Jack type	Sensitivity	Impedance	S/N (weighting network, input level)
PHONO (MM)	Phono	2.0 mV	50 kohms	70 dB (A, 2 mV)
TUNER, CD, VIDEO/AUX, TAPE 1, TAPE 2/DAT	Phono	150 mV	50 kohms	100 dB (150 mV)

Output

Output jack	Jack type	Voltage/impedance
REC OUT	Phono jacks	Voltage 150 mV Impedance 1 kohms
SPEAKERS	—	TA-F411RA Accepts speakers of 4 - 6 ohms/8 - 16 ohms TA-F311R Accepts speakers of 8 - 16 ohms.
HEAD-PHONES	Stereo phone jack	Accepts low and high impedance headphones.

Tone controls

	Response	Turnover frequency
BASS	±8 dB (100 Hz)	500 Hz
TREBLE	±8 dB (15 kHz)	3 kHz

—Continued on page 2—



INTEGRATED STEREO AMPLIFIER
SONY®

Harmonic distortion
 TA-F311R/F411RA: Less than 0.05% at rated output
 Intermodulation (IM) distortion (60 Hz:7 kHz = 4:1)
 Less than 0.05% at rated output
 Frequency response
 PHONO: RIAA equalization curve
 ±0.5 dB
 TUNER, CD, VIDEO/AUX, TAPE 1,
 TAPE 2/DAT: 7 Hz - 100 kHz ±3 dB
 Residual noise
 Damping factor
 Less than 170 μV (network A)
 40 (8 ohms, 1 kHz)

General

System
 Preamplifier: Low-noise, high-gain
 equalizer amplifier
 Power amplifier: Pure-complementary
 SEPP OCL power amplifier with all
 stages directly coupled
 Power requirements
 AEP model: 220 V AC, 50 Hz
 UK model: 240 V AC, 50 Hz
 Power consumption
 AEP model
 TA-F311R: 90 W
 TA-F411RA: 150 W
 UK model
 TA-F411RA: 380 W
 Dimensions
 Approx. 430 × 135 × 315 mm (w/h/d)
 (17 × 5³/₈ × 12¹/₂ inches)
 Weight
 TA-F311R: Approx. 5.9 kg (13 lb 1 oz)
 TA-F411RA: Approx. 7.4 kg
 (16 lb 5 oz)
 Accessories
 Remote commander RM-S310 (1)
 Sony SUM-3 (NS) batteries (2)

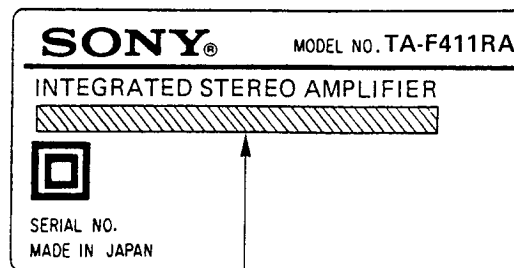
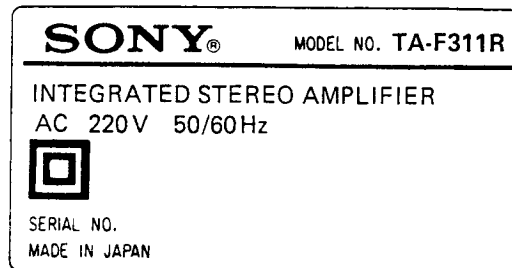
Design and specifications subject to change without notice.

Note

This appliance conforms with EEC Directive, 87/308/EEC regarding interference suppression.

MODEL IDENTIFICATION

—Specification Label—





AEP Model: AC: 220 V ~ 50/60 Hz

UK Model: AC: 240 V ~ 50/60 Hz

For Service Manuals Contact
 MAURITRON TECHNICAL SERVICES
 8 Cherry Tree Rd, Chinnor
 Oxon OX9 4QY
 Tel:- 01844-351694 Fax:- 01844-352554
 Email:- enquiries@mauritron.co.uk

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!


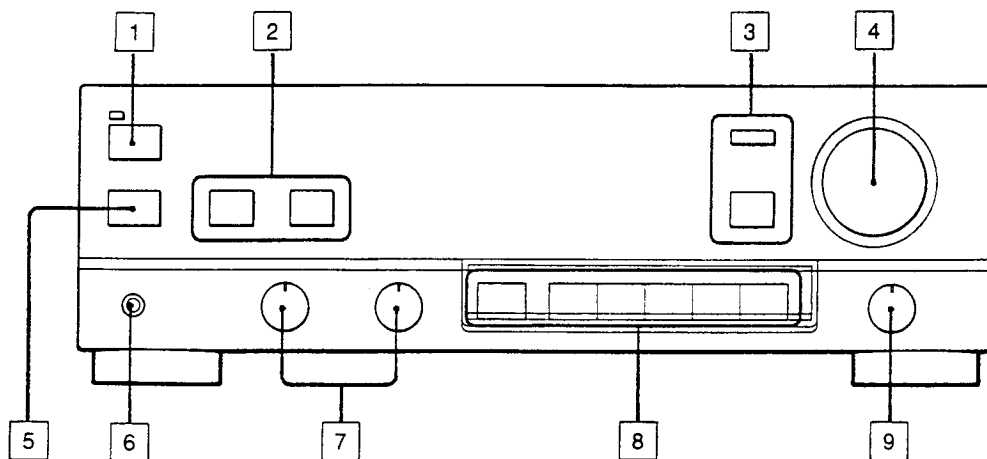
LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE  SUR LES DIAGRAMMES SCHEMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
Specifications		1
Model Identification		2
SECTION 1. GENERAL		
Parts identification		3
Connections		4
SECTION 2. DISASSEMBLY		
SECTION 3. ADJUSTMENTS		
SECTION 4. DIAGRAMS		
4-1. Block Diagram		6
4-2. Circuit Boards Location		8
4-3. Semiconductor Lead Layouts		8
4-4. Printed Wiring Boards		10
4-5. Schematic Diagram		15
SECTION 5. EXPLODED VIEWS		
SECTION 6. ELECTRICAL PARTS LIST		

SECTION 1
GENERAL**Parts identification**

figure: TA-F311R

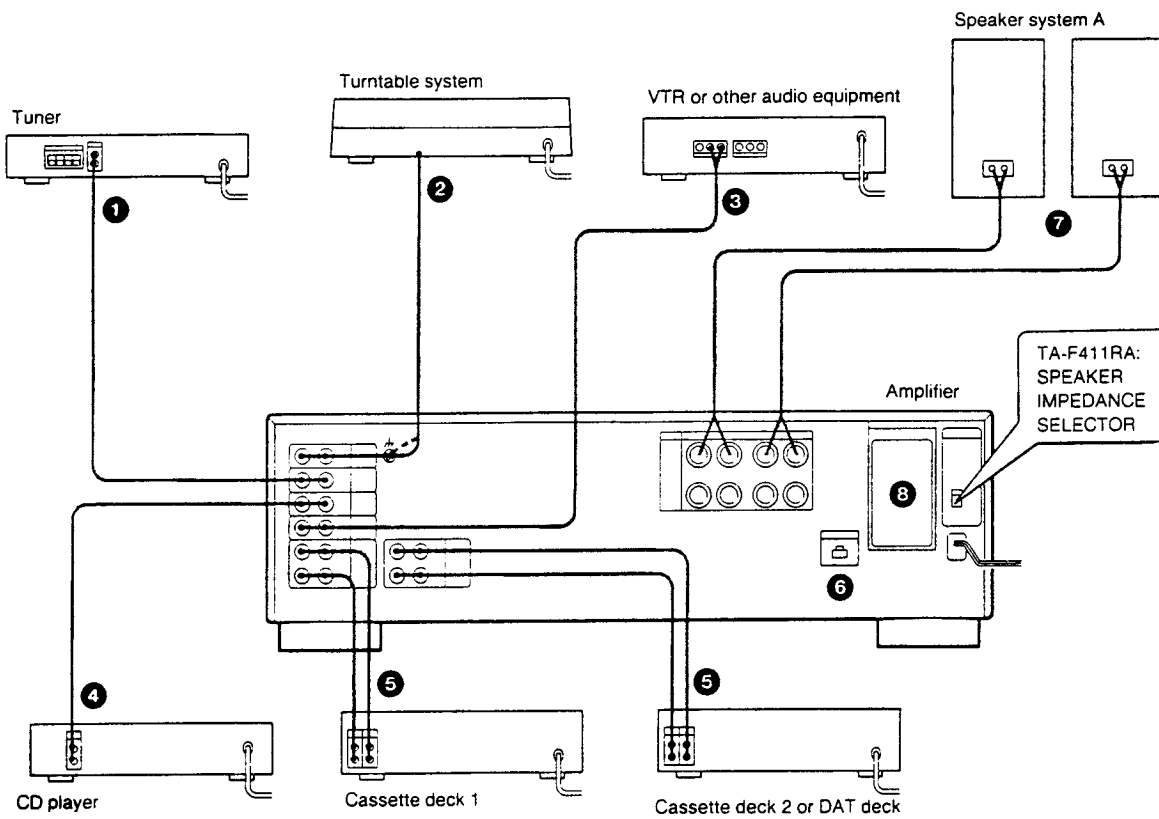


- 1** POWER switch
- 2** SPEAKERS selector
Button selectors for TA-F311R and rotary selector for
TA-F411RA
- 3** SOURCE DIRECT switch and indicator
- 4** VOLUME control
- 5** Remote control sensor
- 6** HEADPHONES jack
- 7** TONE controls
- 8** INPUT SELECTOR and MONITOR
- 9** BALANCE control
- 10** REC OUT (Recording output) SELECTOR
(TA-F411RA only)

Connections

Notes on Connection

- Connect the AC power cord last. Make sure power is off.
- Cord plugs and jacks are color coded. Red plugs and jacks are for right channel (R) and white ones for left channel (L).
- Fully insert cable connectors into jacks. Loose connections may cause hum or noise.

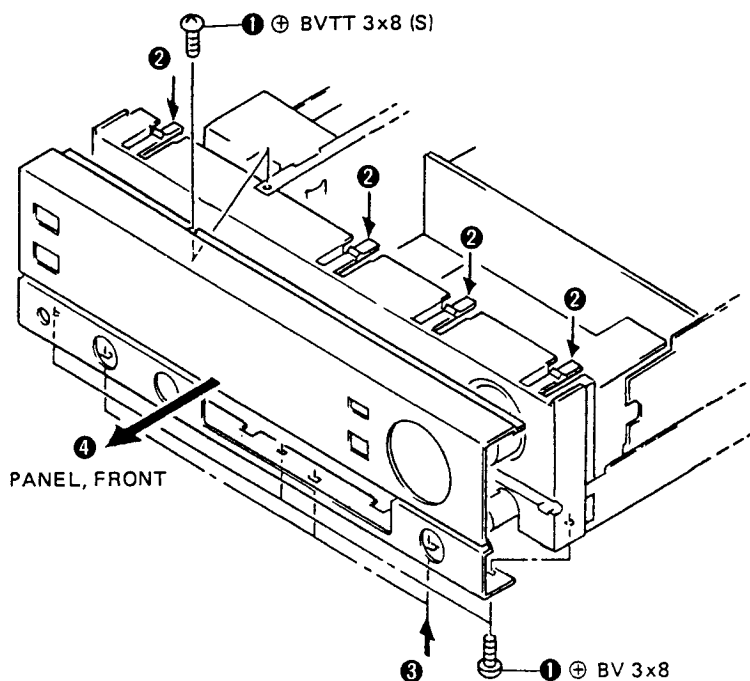


For Service Manuals Contact
MAURITRON TECHNICAL SERVICES
 8 Cherry Tree Rd, Chinnor
 Oxon OX9 4QY
 Tel: 01844-351694 Fax: 01844-352554
 Email: enquiries@mauritron.co.uk

SECTION 2 DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

1. Remove screws ① x4.
2. Push leaves ② down to release 4 claws.
3. Release claws ③ in the bottom.
4. Pull front panel in the direction of arrow ④.



SECTION 3 ADJUSTMENTS

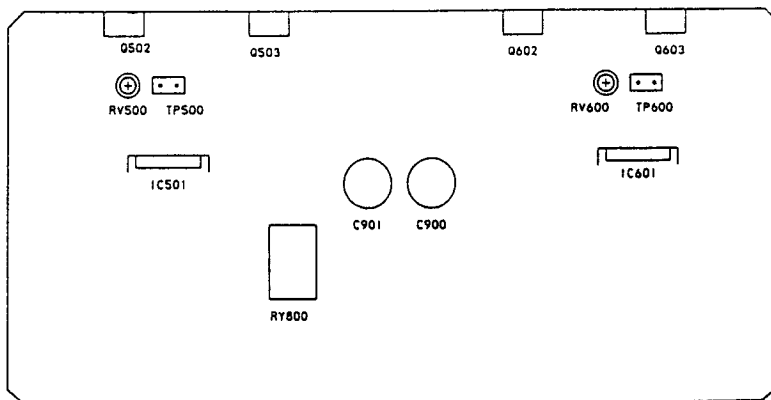
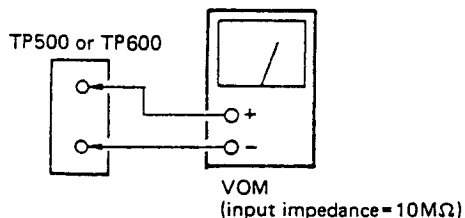
Procedure:

1. Set main volume to minimum.
2. Turn the power on and confirm that RY800 will turn on at about 6 seconds after power-on.
3. Adjust RV500(L-ch) and RV600(R-ch) so that the voltages across TP500 and TP600 become within the adjustment values.

Adjustment Location:

Adjustment Values:

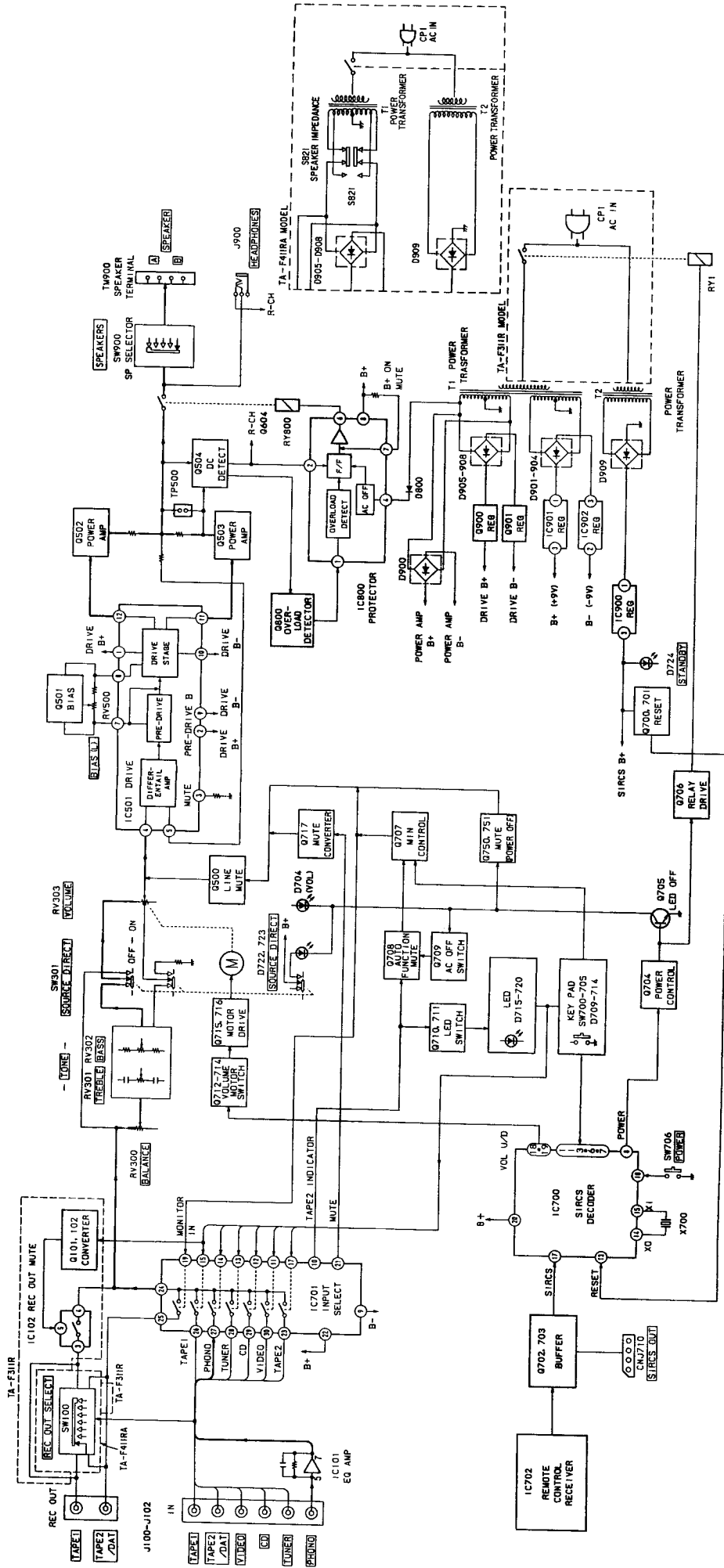
TA-F311R 4mV ±0.3mV
 TA-F411RA 2mV ±0.3mV



AMP BOARD (COMPONENT SIDE)

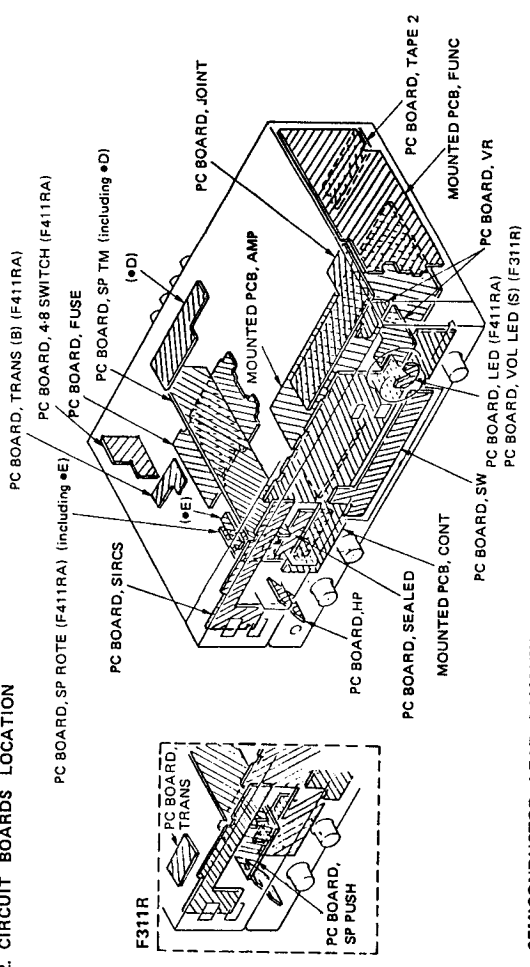
SECTION 4
DIAGRAMS

4-1. BLOCK DIAGRAM

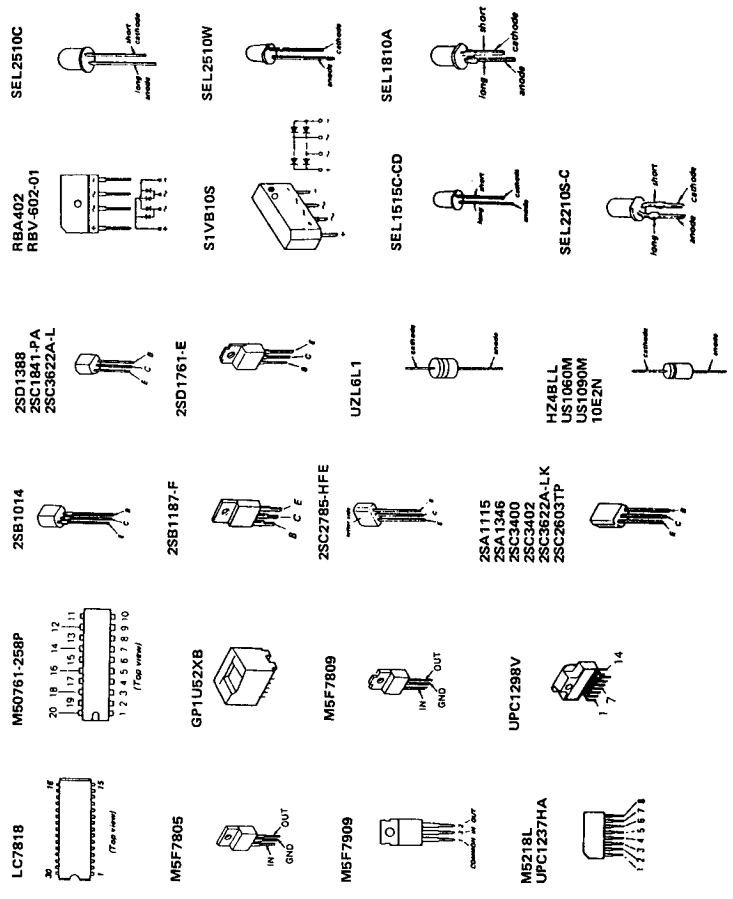


For Service Manuals Contact
MAURITRON TECHNICAL SERVICES
 8 Cherry Tree Rd. Chinnor
 Oxon OX9 4QY
 Tel: 01844-351694 Fax: 01844-352554
 Email: enquiries@mauritron.co.uk

4-2. CIRCUIT BOARDS LOCATION



4-3. SEMICONDUCTOR LEAD LAYOUTS



• SEMICONDUCTOR LOCATIONS

Ref. No.	Location	Ref. No.	Location
D501	B-23	D913	(TA-F311R) H-4
D502	B-23	D913	(TA-F411RA) B-8
D601	B-18	D914	(TA-F311R) H-4
D602	C-18	D914	(TA-F411RA) B-8
D700	J-17	IC101	B-37
D701	I-20	IC102	E-32
D702	B-32	IC501	C-25
D704	(TA-F311R) G-15	IC601	C-18
D705	(TA-F411RA) D-17	IC700	J-19
D706	J-21	IC701	C-32
D707	J-21	IC702	J-28
D708	J-20	IC800	D-26
D709	J-21	IC900	(TA-F311R) I-5
D710	I-20	IC901	(TA-F411RA) B-9
D711	I-20	IC902	C-17
D712	I-20		
D713	J-19		
D714	J-19	0101	E-32
D715	K-20	0102	E-32
D716	K-19	0500	D-24
D717	K-18	0501	A-25
D718	K-17	0502	A-25
D719	K-16	0503	A-23
D720	K-15	0504	B-23
D721	B-34	0600	D-18
D722	I-16	0601	A-19
D723	I-15	0602	A-20
D724	I-29	0603	A-18
D725	B-34	0604	B-18
D750	D-32	0700	J-17
D751	K-20	0701	J-16
D752	K-20	0702	I-21
D753	K-20	0703	I-20
D754	K-20	0704	K-18
D755	K-20	0705	J-17
D756	B-35	0706	H-4
D757	I-21	0707	B-34
D758	A-34	0708	B-34
D800	E-26	0709	B-34
D801	D-24	0710	K-21
D802	D-24	0711	J-21
D821	C-15	0712	I-20
D822	D-15	0713	I-20
D900	D-21	0714	I-19
D901	E-17	0715	I-19
D902	E-17	0716	I-18
D903	E-17	0717	B-35
D904	E-17	0750	B-35
D905	D-21	0751	B-34
D906	C-20	0761	I-27
D907	D-20	0800	C-26
D908	G-20	0800	D-19
D909	(TA-F311R) G-5	0901	D-20
	(TA-F411RA) B-9		

For Service Manuals Contact
MAURITRON TECHNICAL SERVICES
 8 Cherry Tree Rd, Chinnor
 Oxon OX9 4QY
 Tel: 01844-351694 Fax: 01844-352554
 Email: enquiries@mauritron.co.uk

4-4. PRINTED WIRING BOARDS

- See page 8 for Circuit Boards Location and Semiconductor Lead Layouts.
- See page 9 for Semiconductor Location.

	1	2	3	4	5	6	7	8	9	10
--	---	---	---	---	---	---	---	---	---	----

A

B

C

D

E

F

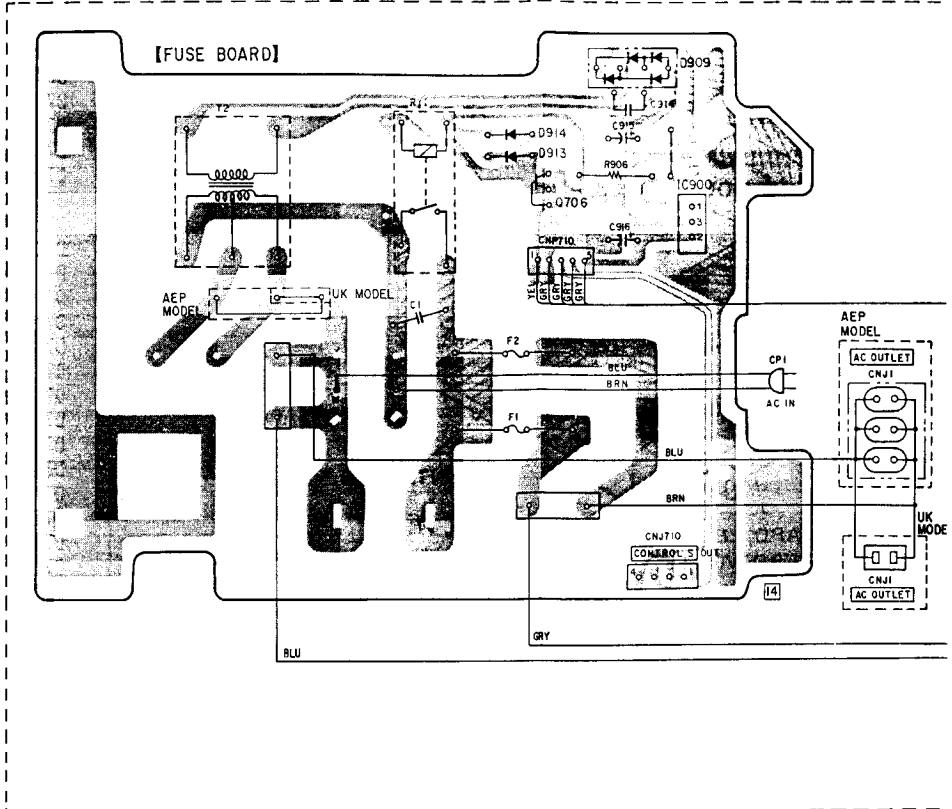
G

H

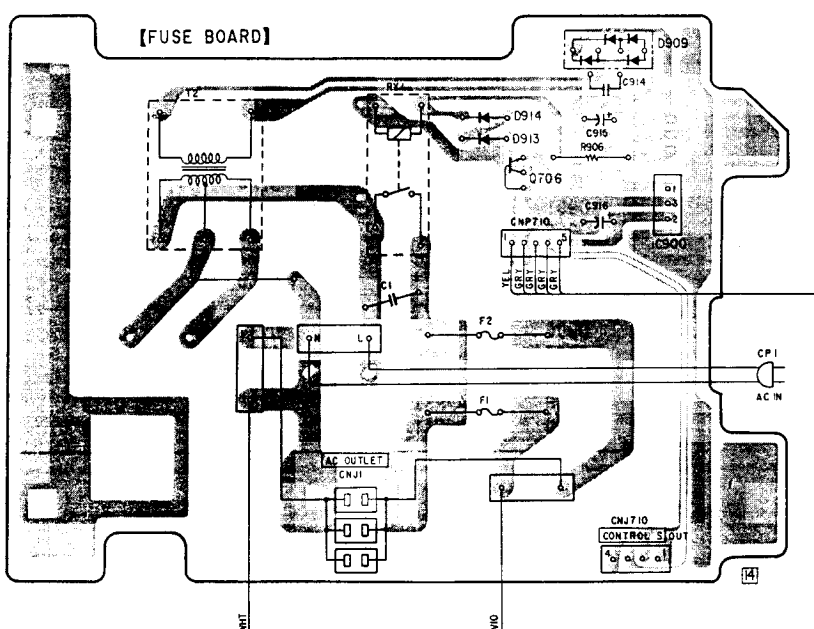
I

J

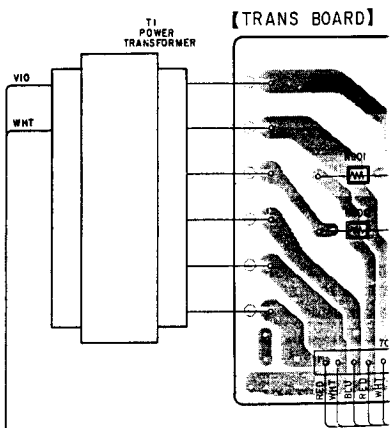
K



TA-F311R MODEL



For Service Manuals Contact
MAURITRON TECHNICAL SERVICES
 8 Cherry Tree Rd, Chinnor
 Oxon OX9 4QY
 Tel:- 01844-351854 Fax:- 01844-352554
 Email:- enquiries@mauritron.co.uk

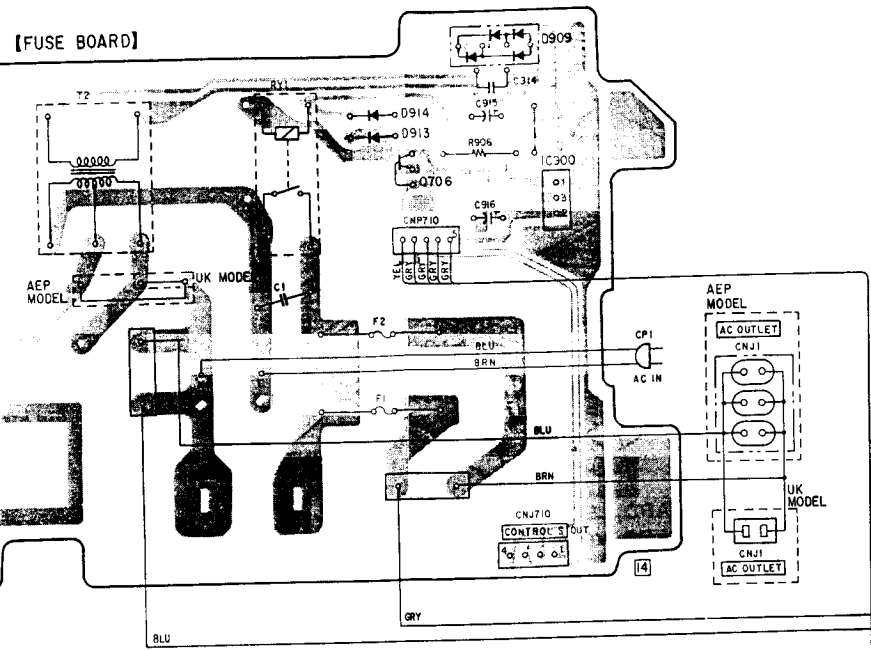


BOARDS
Unit Boards Location and Semiconductor Lead Layouts.
Semiconductor Location.

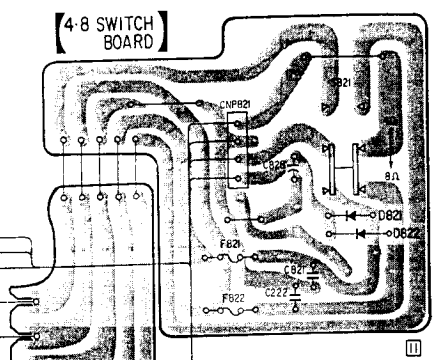
6	7	8	9	10	11	12	13	14	15
---	---	---	---	----	----	----	----	----	----

TA-F411RA

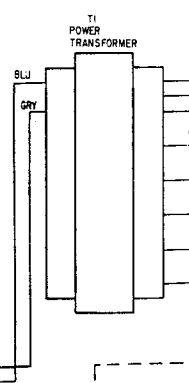
[FUSE BOARD]



[4-8 SWITCH BOARD]

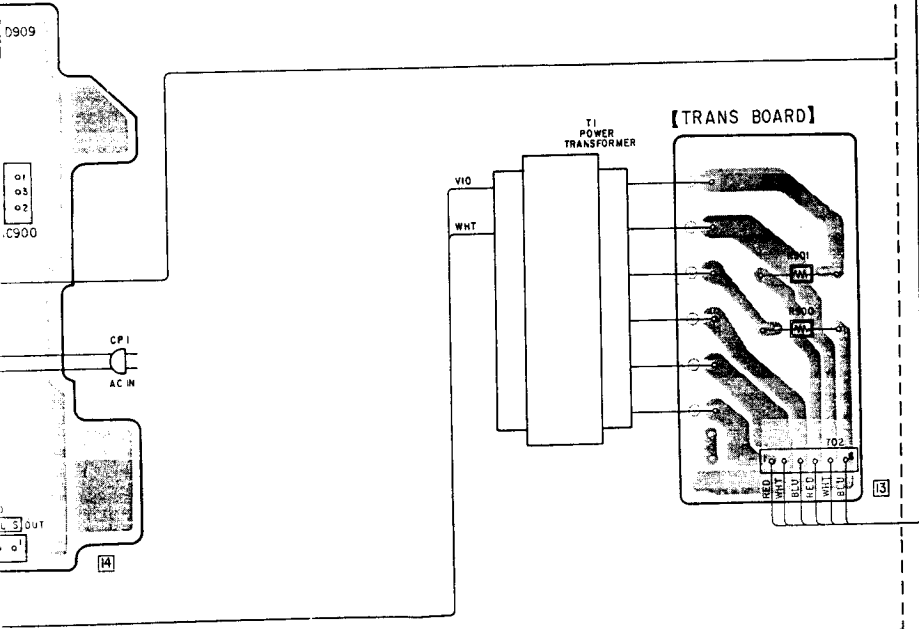


[TRANS (B) BOARD]

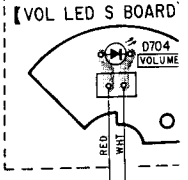


TA-F31R MODEL

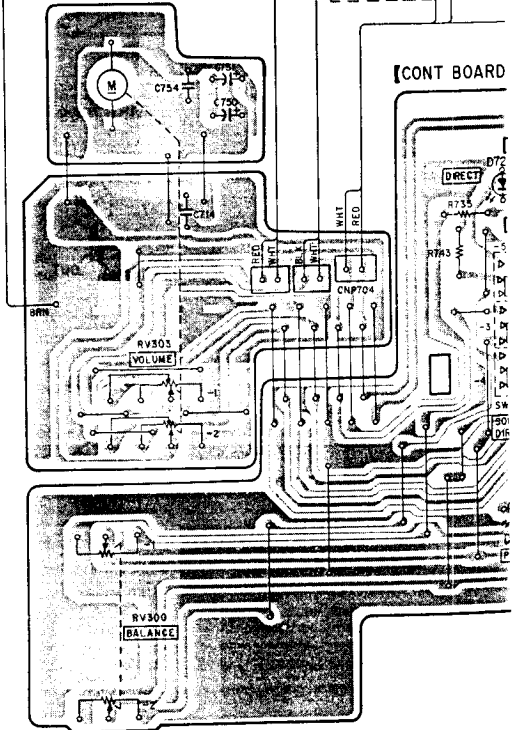
[TRANS BOARD]

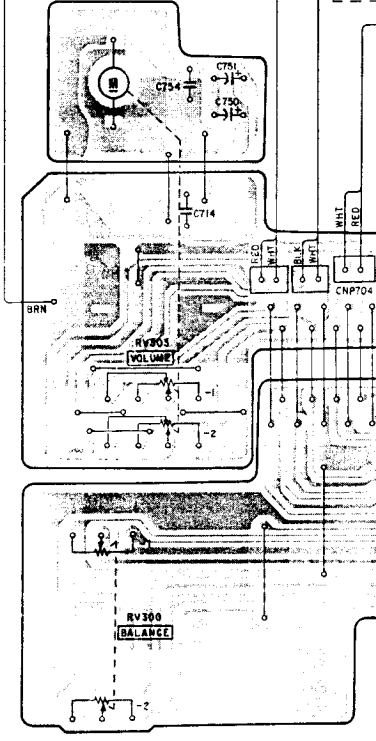
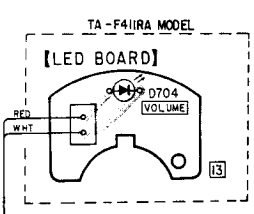
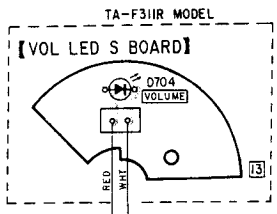
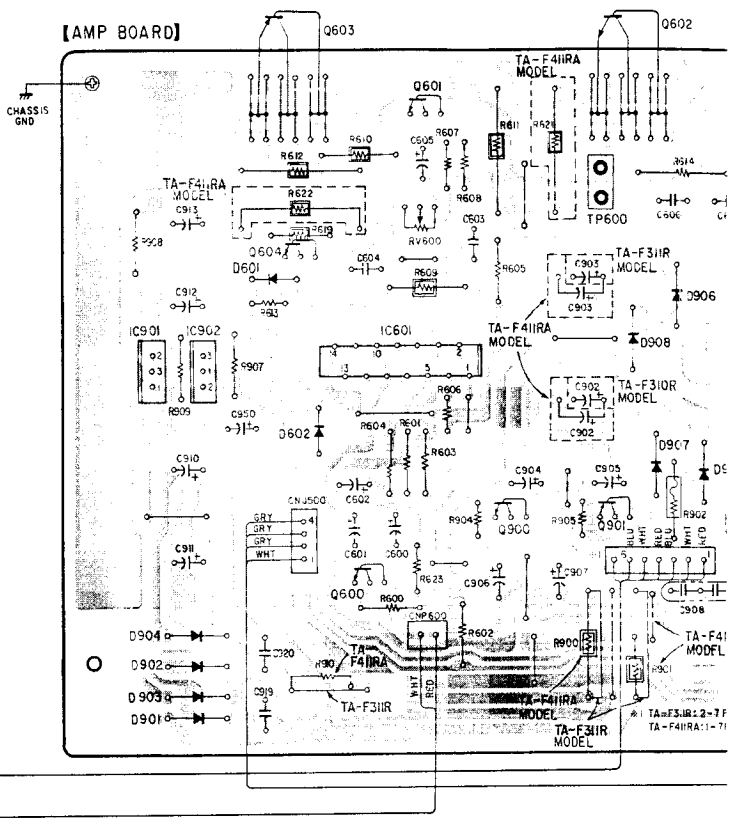
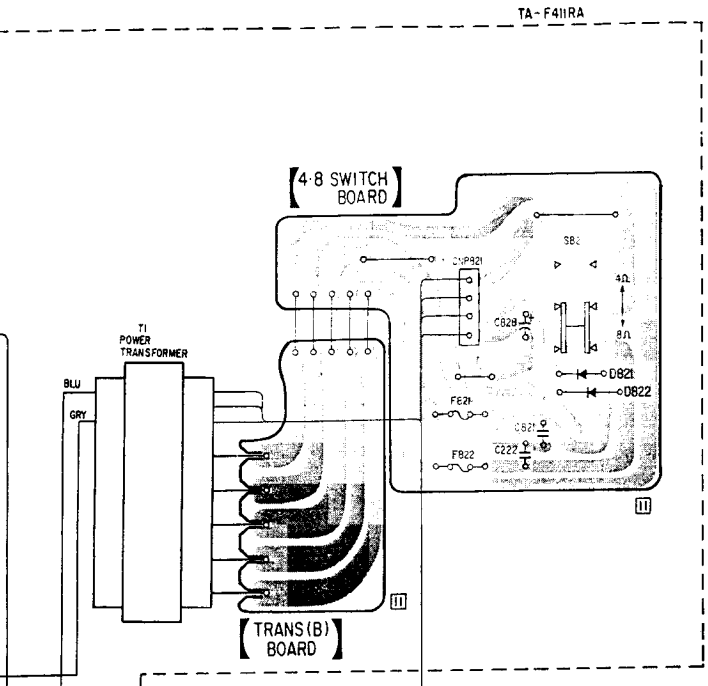


[VOL LED S BOARD]

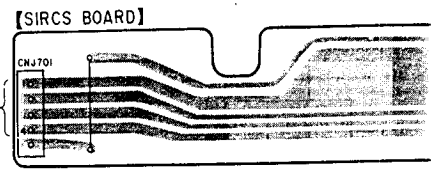
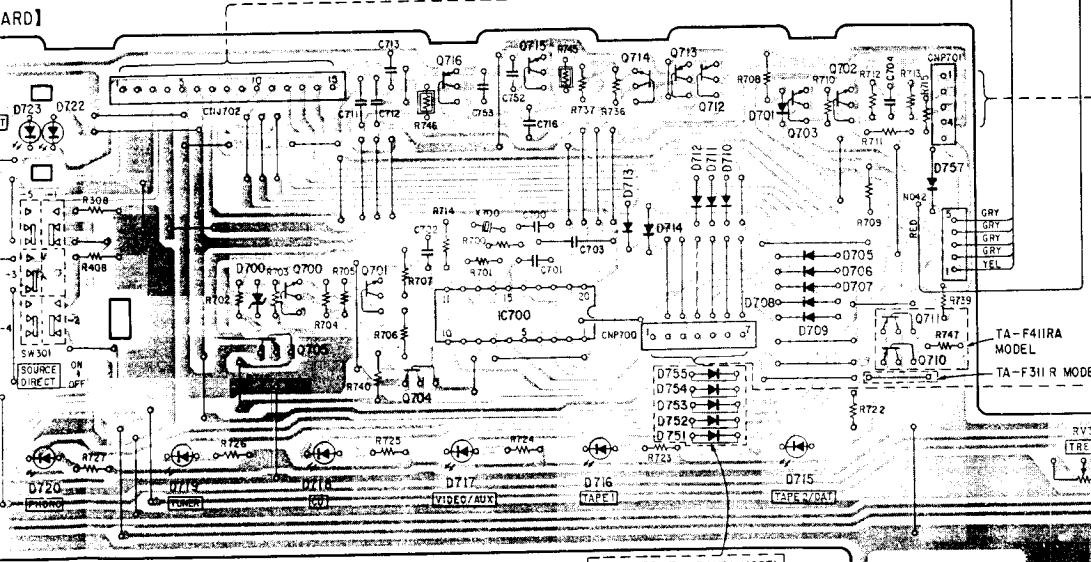
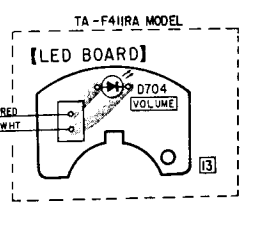
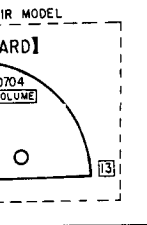
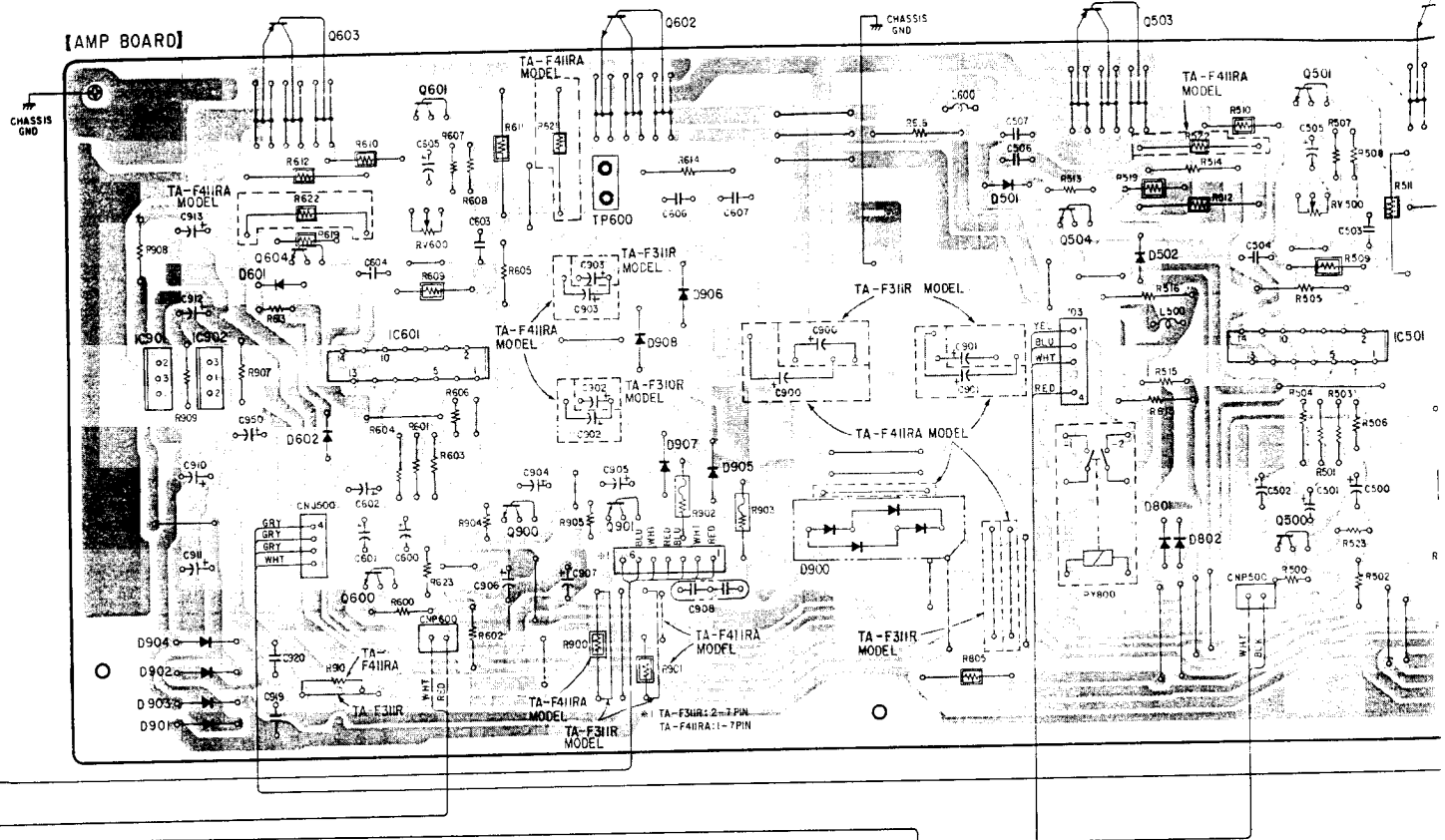


[CONT BOARD]



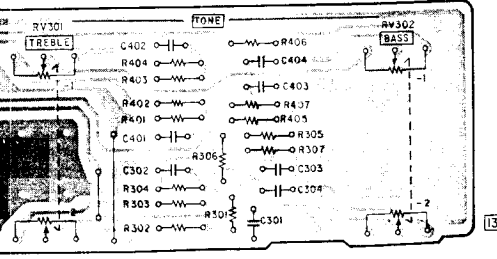


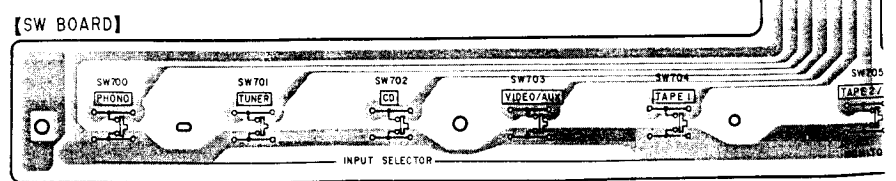
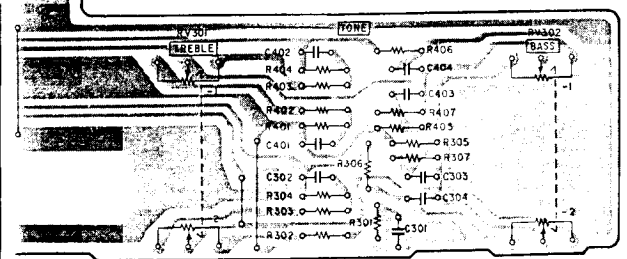
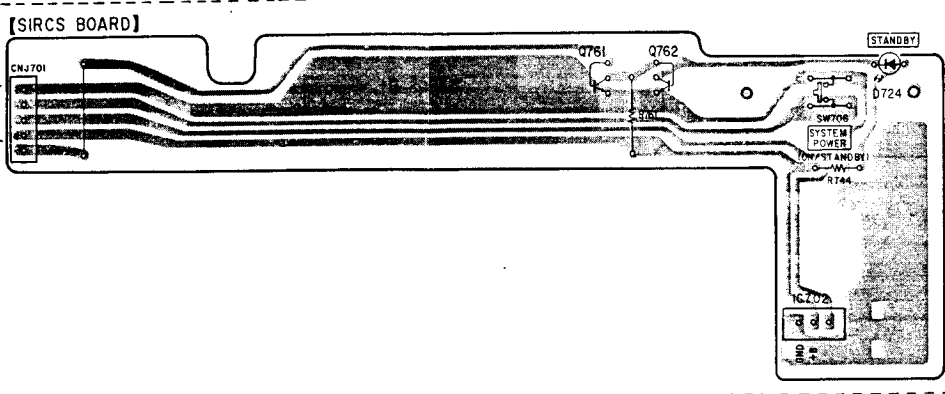
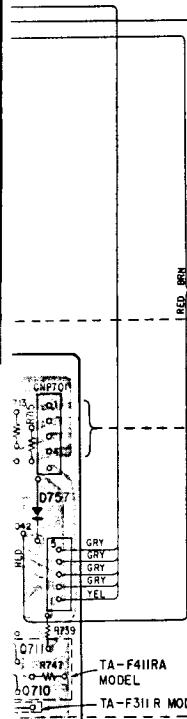
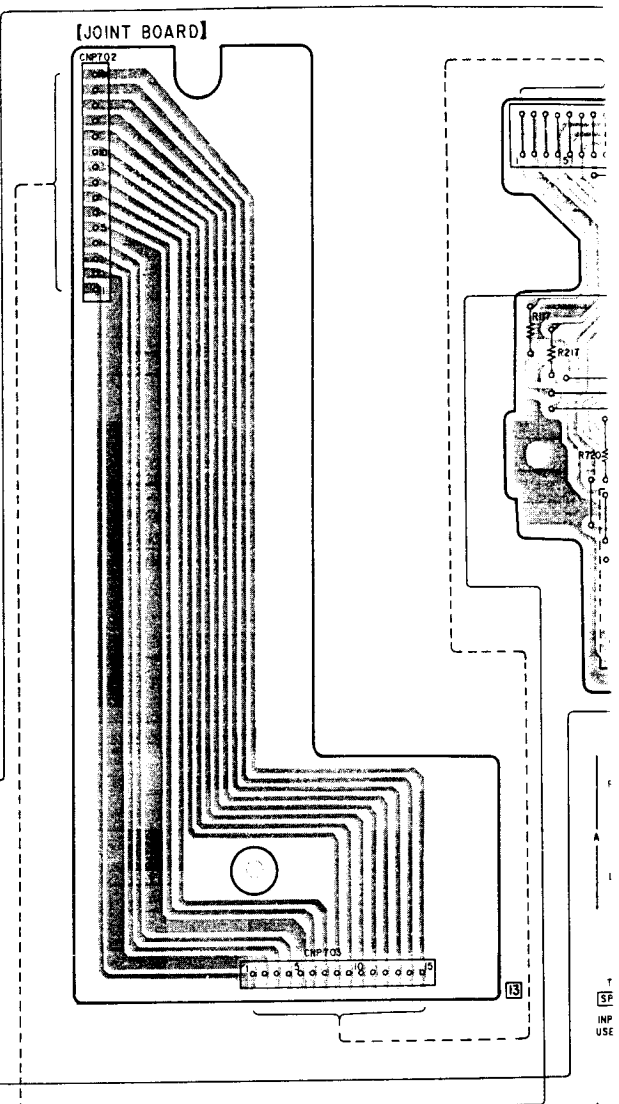
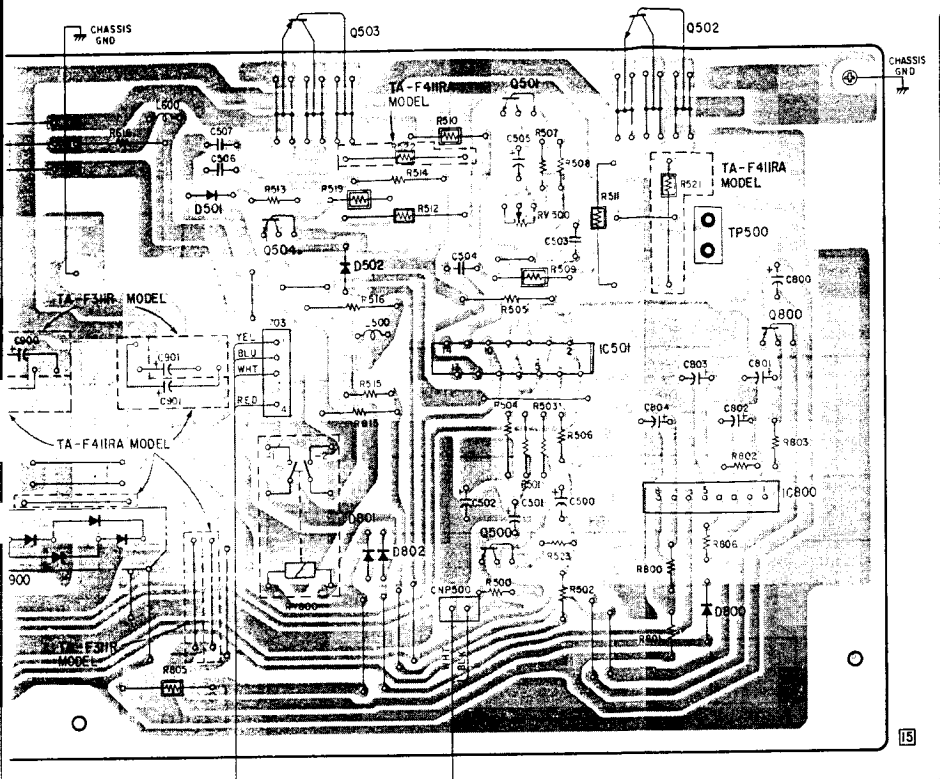
D751-755 TA-F41RA MODEL
JUMPER TA-F31R MODEL



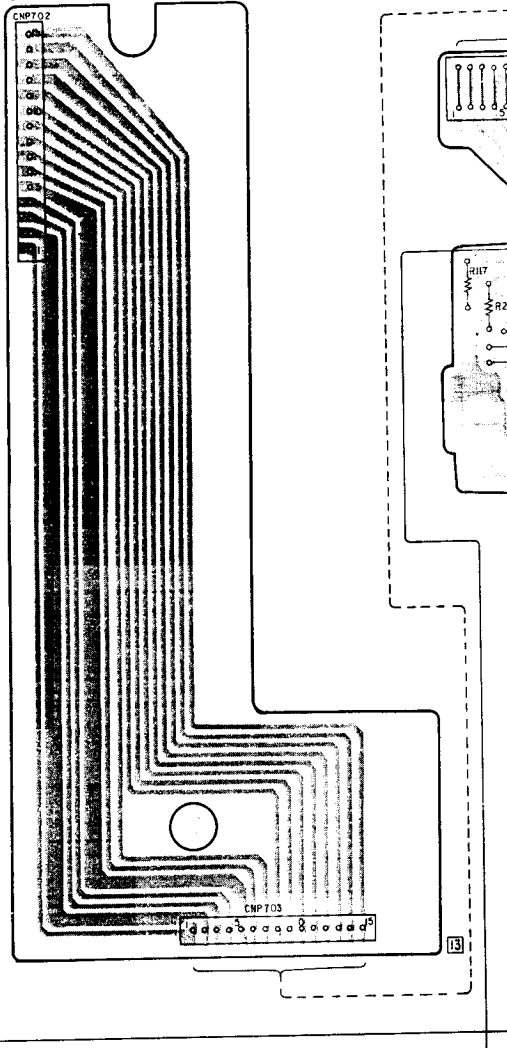
For Service Manuals Contact
MAURITRON TECHNICAL SERVICES
 8 Cherry Tree Rd, Chinnor
 Oxon OX9 4QY
 Tel: 01844-351634 Fax: 01844-352554
 Email: enquiries@mauritron.co.uk

D751 - 755 TA - F41IRA MODEL
 JUMPER TA - F31IR MODEL

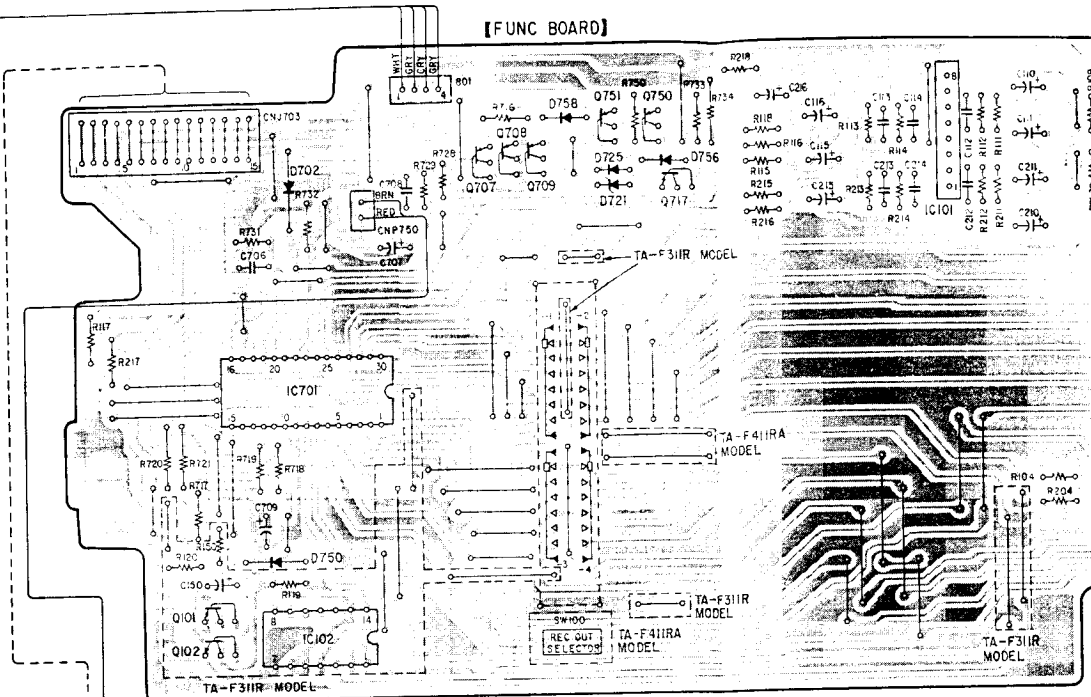




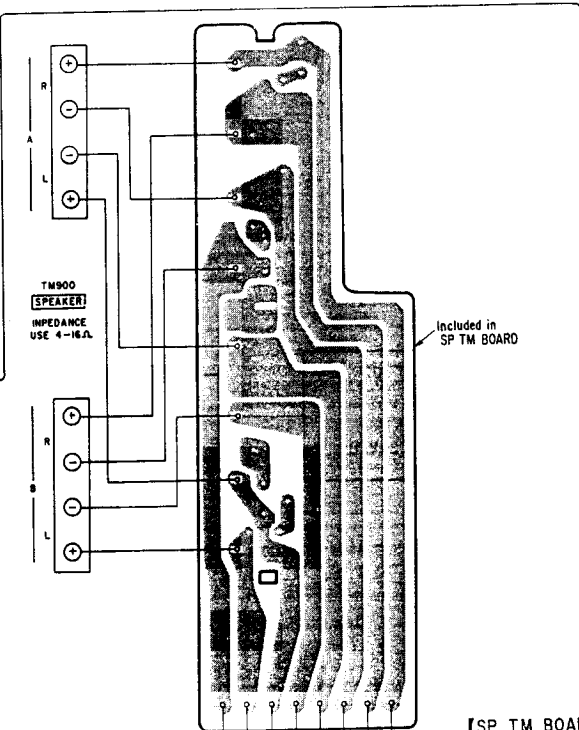
[JOINT BOARD]



[FUNC BOARD]



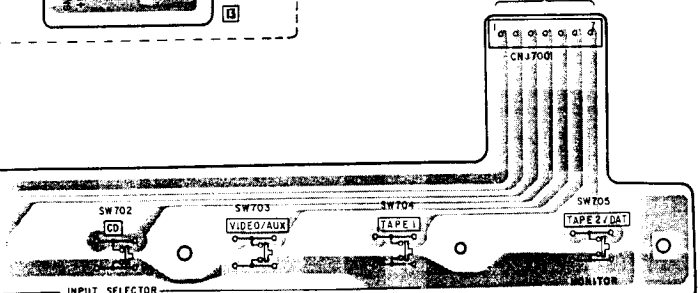
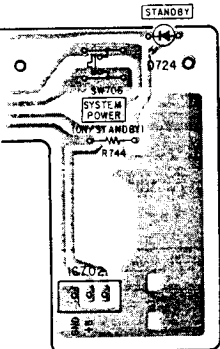
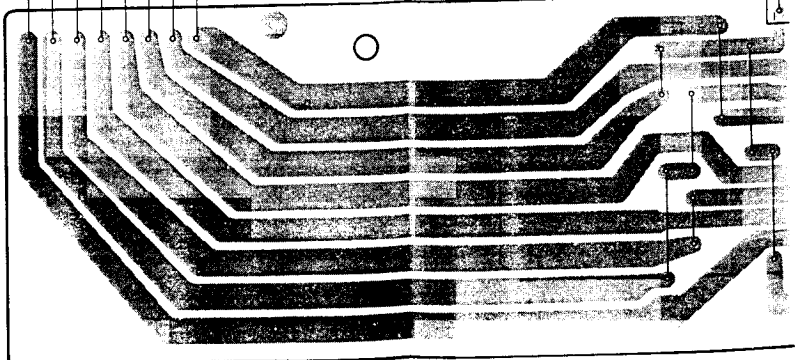
[TAPE 2 BOARD]

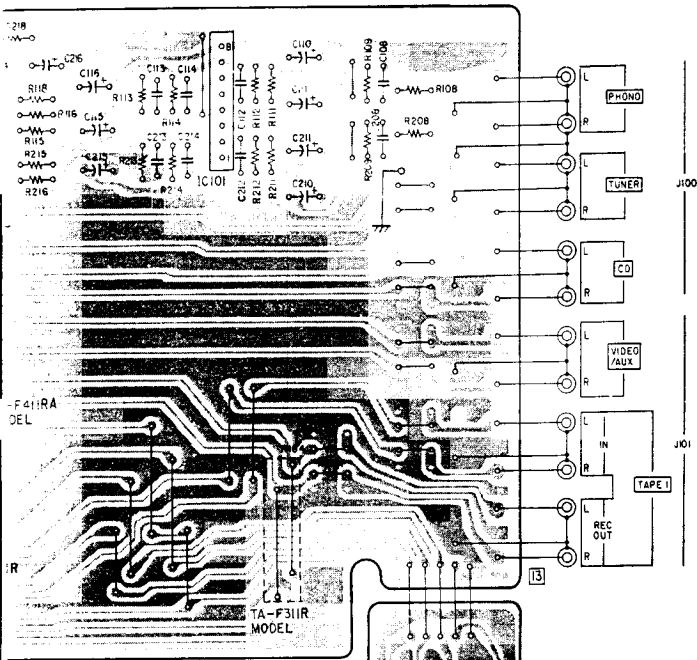


For Service Manuals Contact
MAURITRON TECHNICAL SERVICES
 8 Cherry Tree Rd, Chinnor
 Oxon OX9 4QY
 Tel: 01844-351694 Fax: 01844-352554
 Email: enquiries@mauritron.co.uk

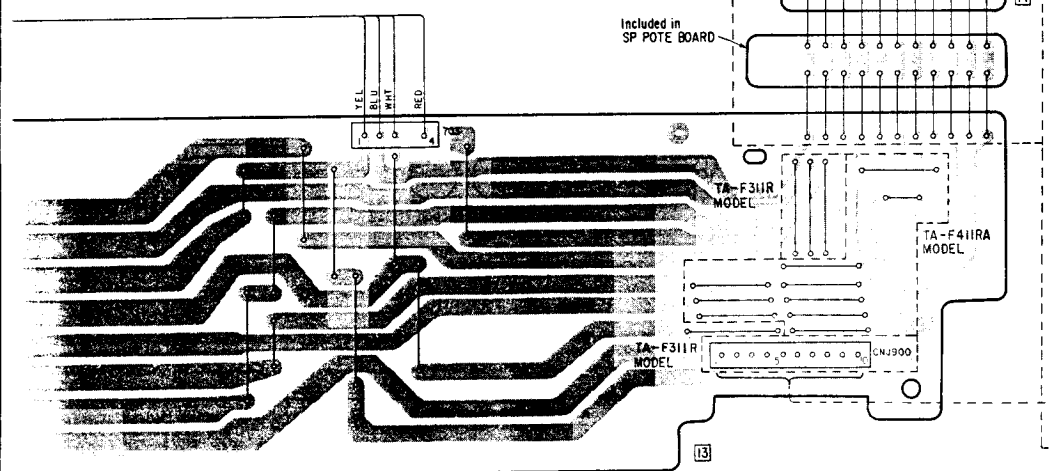
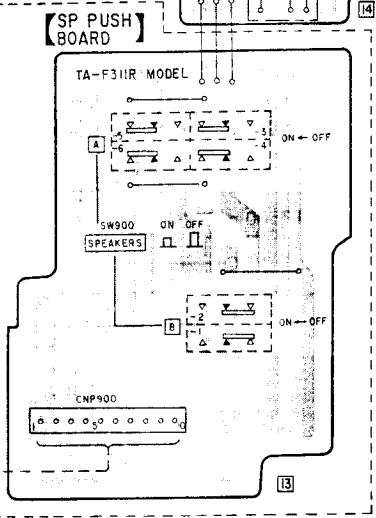
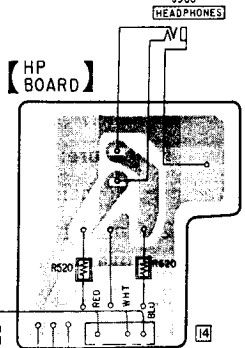
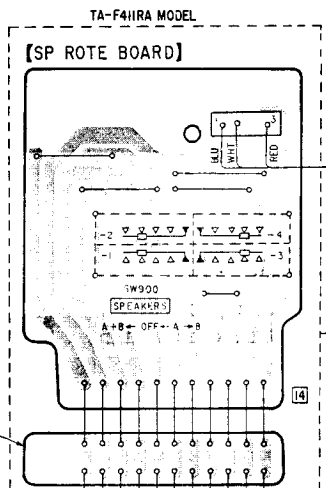
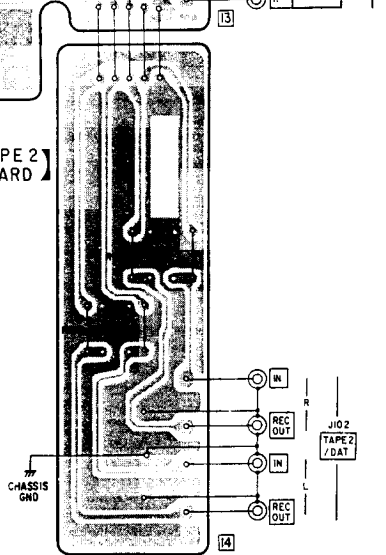
CHASSIS GND

[SP TM BOARD]





TAPE 2 BOARD

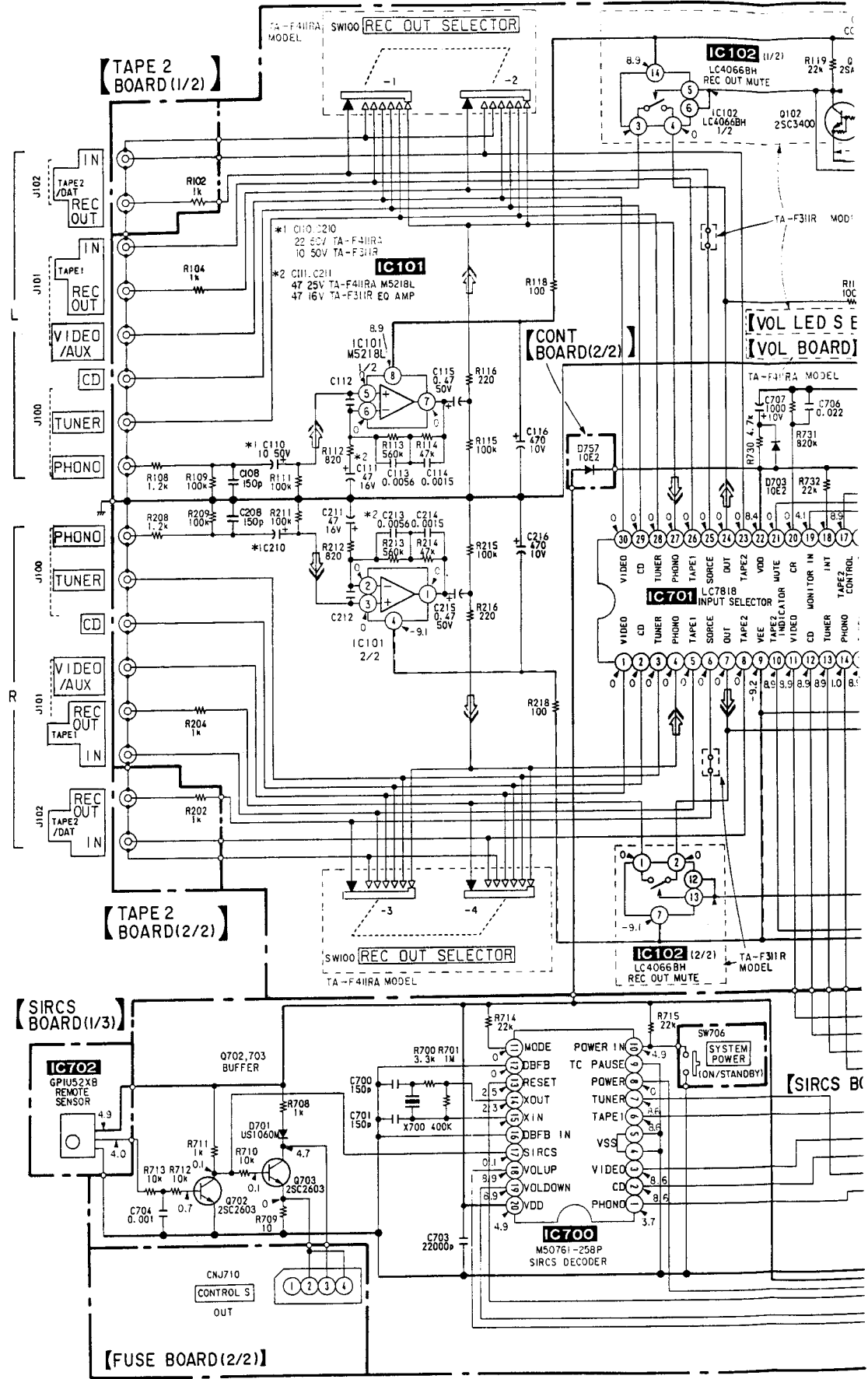


For Service Manuals Contact
MAURITRON TECHNICAL SERVICES
8 Cherry Tree Rd, Chinnor
Oxon OX9 4QY
Tel:- 01844-351694 Fax:- 01844-352554
Email:- enquiries@mauritron.co.uk

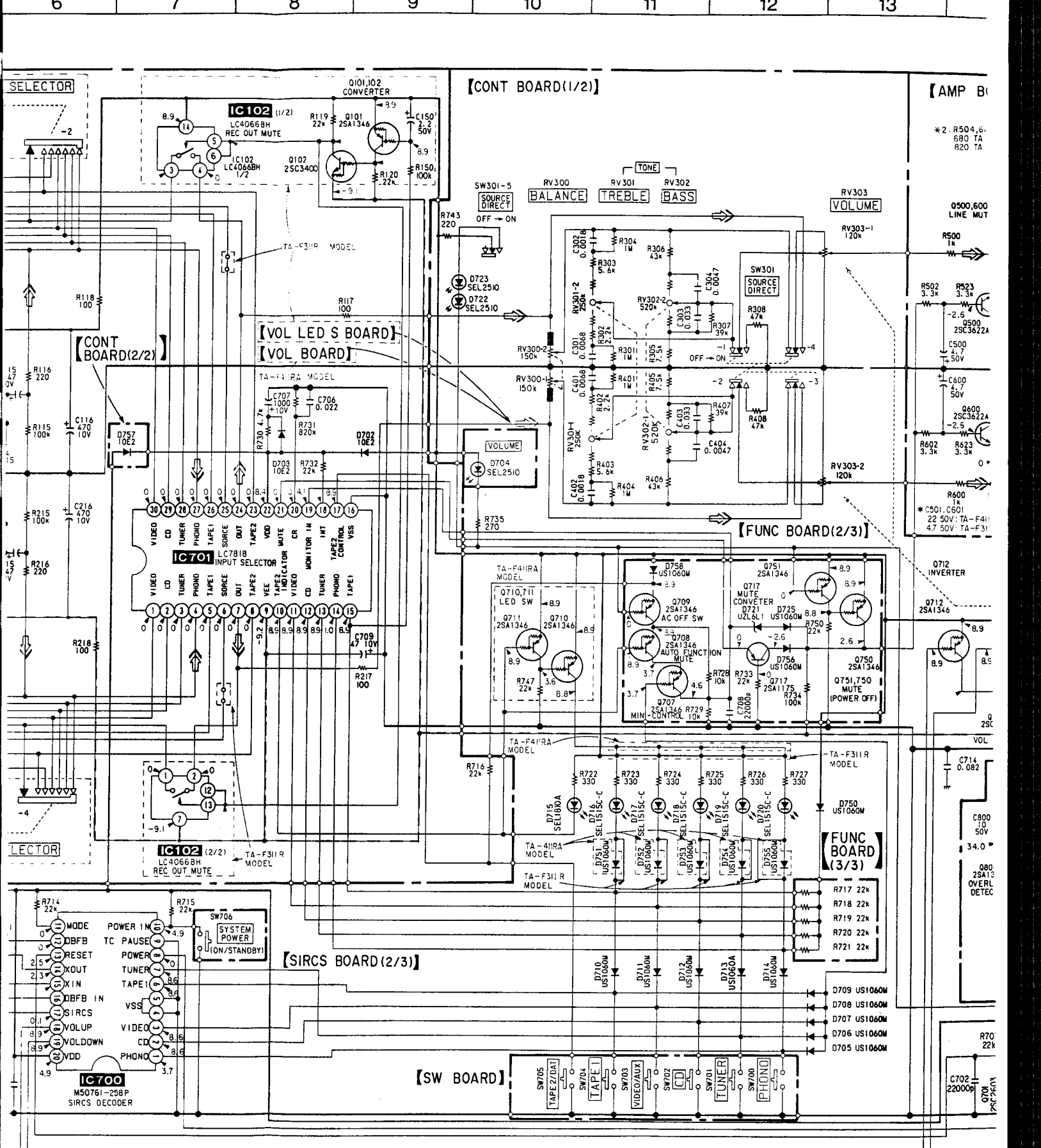
4-5. SCHEMATIC DIAGRAM

[FUNC BOARD (1/3)]

A
B
C
D
E
F
G
H
I
J
K



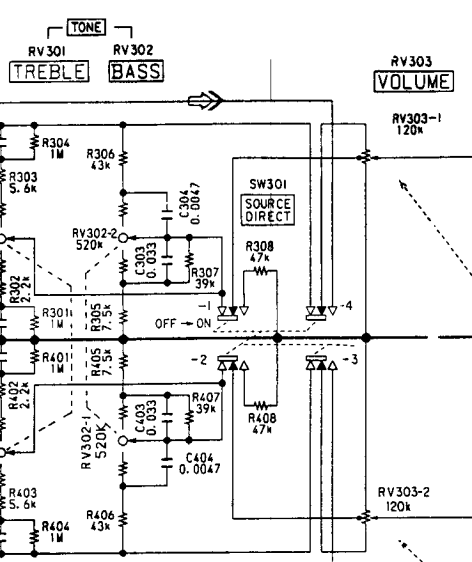
For Service Manuals Contact
MAURITRON TECHNICAL SERVICES
 8 Cherry Tree Rd, Chinnor
 Oxon OX9 4QY
 Tel: 01844-351694 Fax: 01844-352554
 Email: enquires@mauritron.co.uk



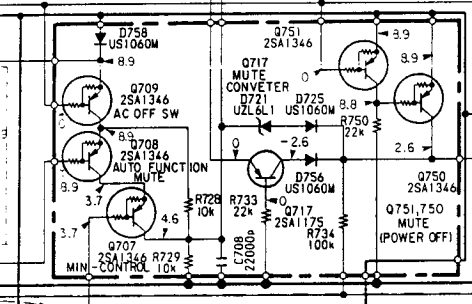
TA-F41RA
TA-F31R

TA

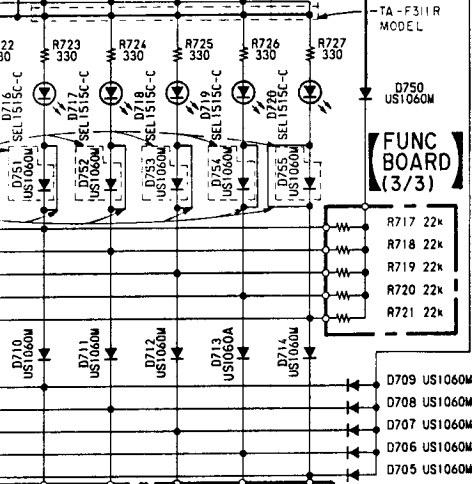
[AMP BOARD]



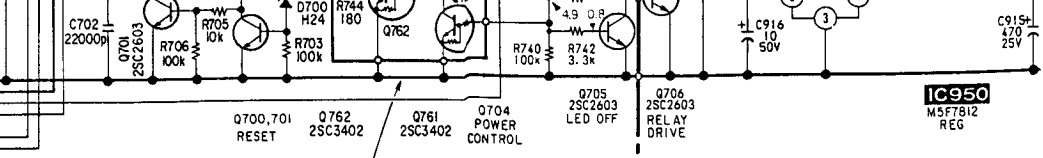
[FUNC BOARD(2/3)]



[FUNC BOARD(3/3)]



[SIRCS BOARD(3/3)]



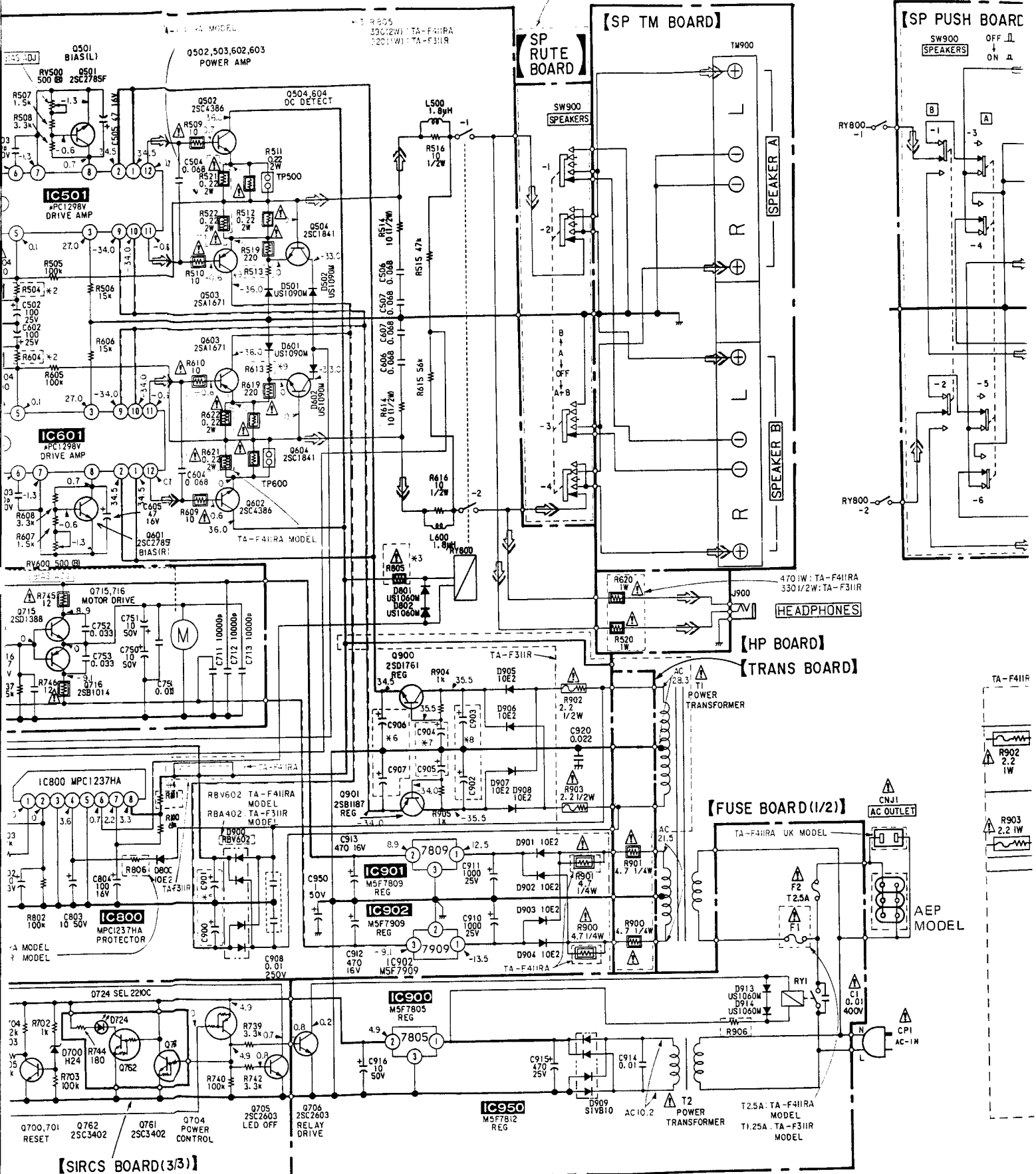
* 4 801 TA-F41RA
* 5 C900, 901 8200 56V TA-F41RA 4700 35V TA-F31R

For Service Manuals Contact
MAURITRON TECHNICAL SERVICES
 8 Cherry Tree Rd, Chinnor
 Oxon OX9 4QY
 Tel: 01844-351694 Fax: 01844-352554
 Email: enquiries@mauritron.co.uk

TA-F41RA
TA-F41RA
TA-F31R

TA-F41RA MODEL

TA-F31R MODEL



*4: TA-F41RA
*5: TA-F31R

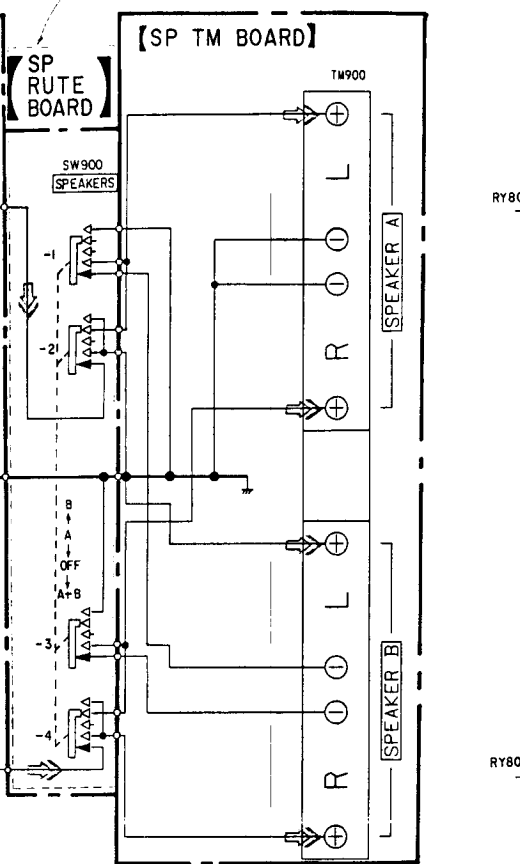
*5: C900, 901
8200 56V: TA-F41RA
4700 35V: TA-F31R

*6: C906, 907
22 63V: TA-F41RA
22 50V: TA-F31R

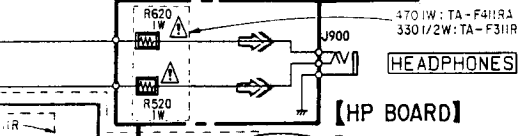
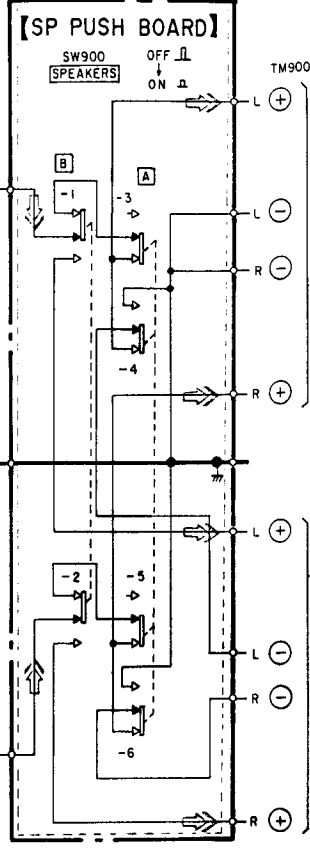
*8: C902, 903
1000 63V: TA-F41RA
470 35V: TA-F31R

*7: C904, 905
22 63V: TA-F41RA
22 50V: TA-F31R

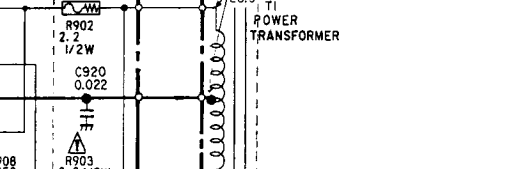
TA-F411RA MODEL



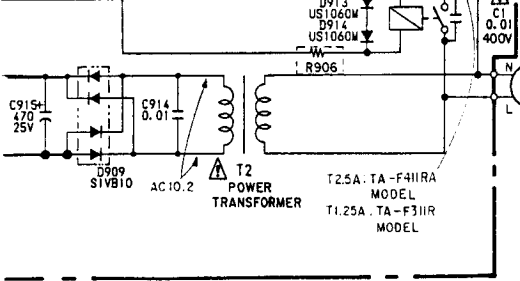
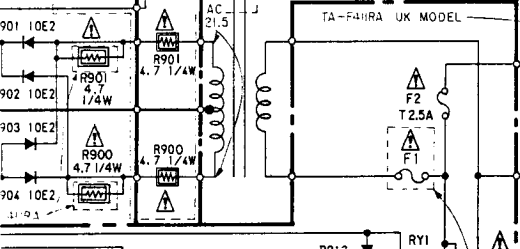
TA-F311R MODEL



470 1W: TA-F411RA
330 1/2W: TA-F311R



POWER TRANSFORMER

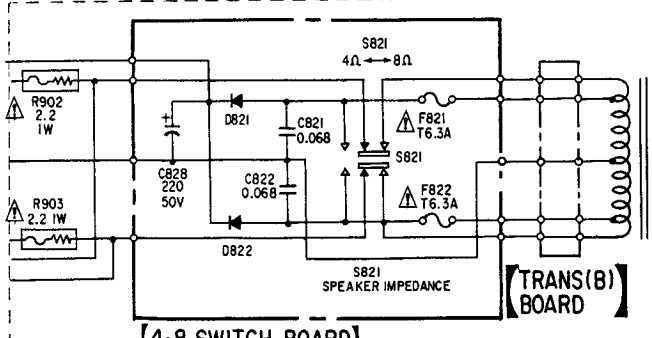


*6 C906, 907
22 63V: TA-F411RA
22 63V: TA-F311R

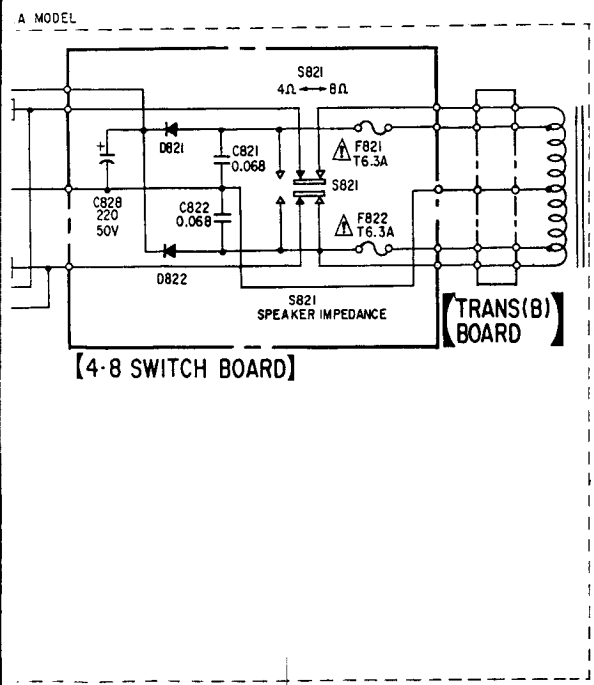
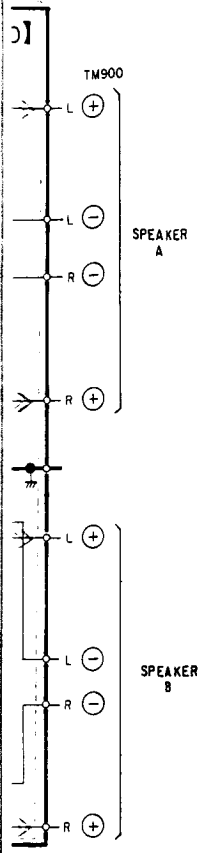
*8 C902, 903
1000 63V: TA-F411RA
470 35V: TA-F311R

*7 C904, 905
22 63V: TA-F411RA
22 63V: TA-F311R

TA-F411RA MODEL












For Service Manuals Contact
MAURITRON TECHNICAL SERVICES
8 Cherry Tree Rd, Chinnor
Oxon OX9 4QY
Tel: 01844-351694 Fax: 01844-352554
Email: enquiries@mauritron.co.uk



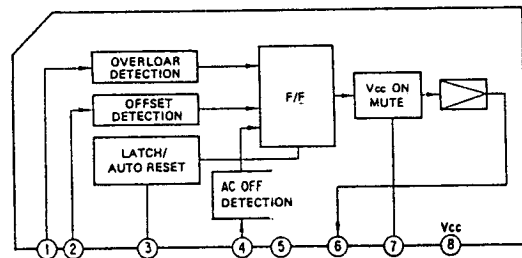
For Service Manuals Contact
MAURITRON TECHNICAL SERVICES
 8 Cherry Tree Rd, Chinnor
 Oxon OX9 4QY
 Tel:- 01844-351694 Fax:- 01844-352554
 Email:- enquiries@mauritron.co.uk

A
B
C
D
E
F
G
H
I
J

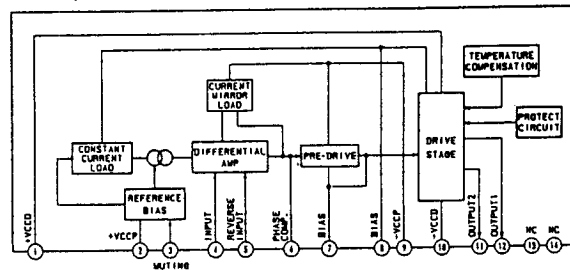
- All capacitors are in μF unless otherwise noted. pF: μpF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}$ W or less unless otherwise specified.
-  : nonflammable resistor.
-  : fusible resistor.
-  : B-LINE
-  : B-LINE
-  : adjustment for repair.
- Voltage are dc with respect to ground under no signal conditions.
- no mark: PHONO
- Voltages are taken with a VOM. (Input impedance 50K Ω)
- Voltage variations may be noted due to normal production tolerances.
- Signal path.
-  : PHONO
- abbreviation
-  : West Germany

Note: The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

IC800 $\mu\text{PC1237HA}$



IC501, IC601 UPC1298





SECTION 5 EXPLODED VIEWS

NOTE:

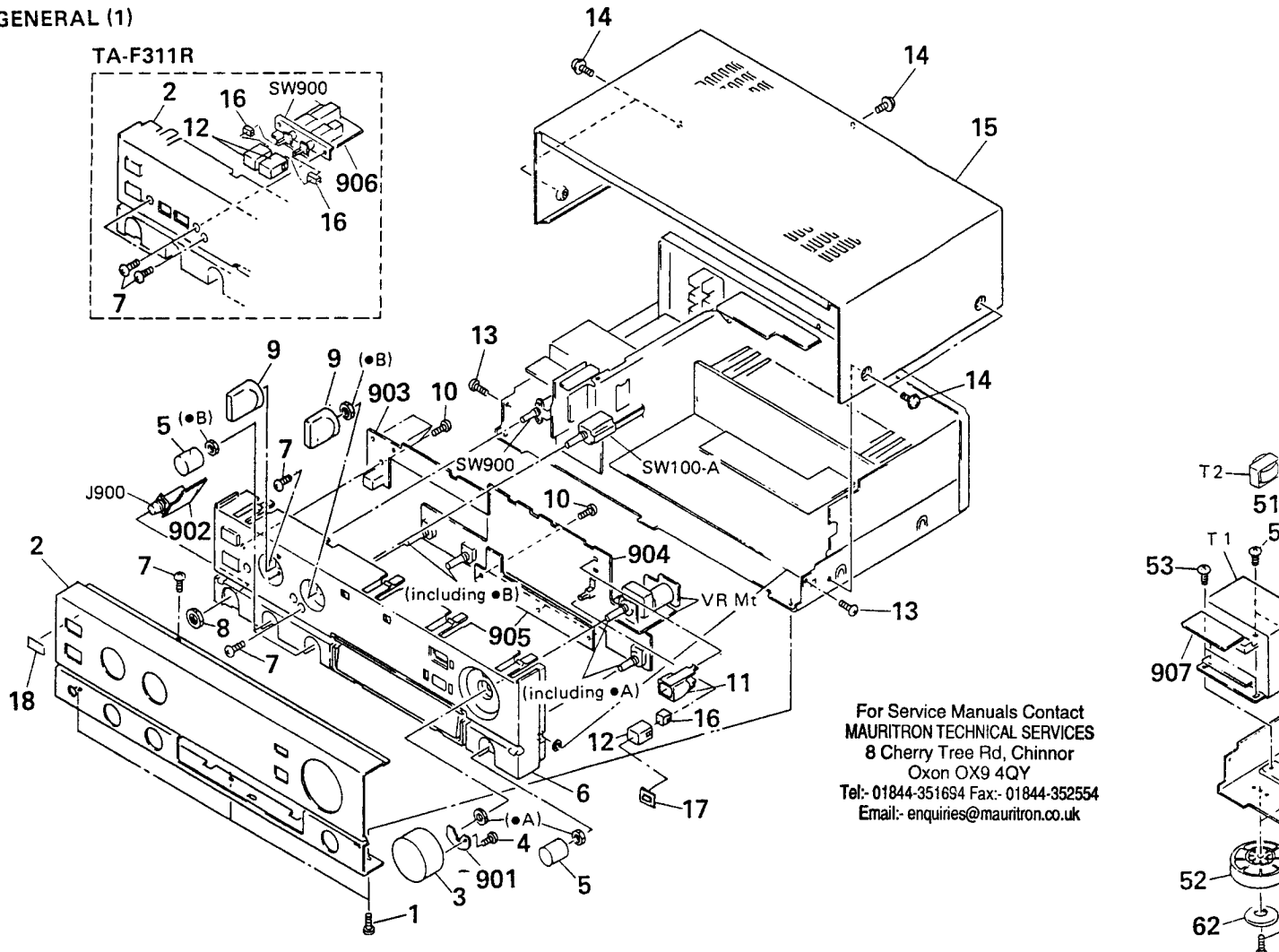
- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts
Example:
(RED) ... KNOB, BALANCE (WHITE)
↑ Cabinet's Color ↑ Parts Color

The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

2. GENERAL

1. GENERAL (1)



For Service Manuals Contact
MAURITRON TECHNICAL SERVICES
8 Cherry Tree Rd, Chinnor
Oxon OX9 4QY
Tel: 01844-351694 Fax: 01844-352554
Email: enquiries@mauritron.co.uk



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
1	3-703-685-21	SCREW (+BV 3X8)		12	4-908-875-01	KNOB, SQUARE	
2	4-931-915-32 4-931-915-21	(F311R)...PANEL, FRONT (F411RA)...PANEL, FRONT		13	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
3	4-929-288-01 ★X-4906-828-1	(F311R)...KNOB (VOL 47) (F411RA)...KNOB (47) ASSY		14	3-704-366-01	SCREW (CASE) (M3X8)	
4	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S		15	4-929-294-11	CASE	
5	4-916-746-11	KNOB (DIA. 21), ROUND		16	4-864-307-00	RING	
6	X-4885-966-1 X-4885-967-1	(F311R)...PANEL (BASE) ASSY (F411RA)...PANEL (BASE) ASSY		17	4-929-284-01	PLATE, INDICATION	
7	7-682-548-04	SCREW +BVTT 3X8 (S)		18	4-908-848-01	EMBLEM, SONY	
8	4-931-902-01	NUT (M12X1)		901	*1-631-777-11 *1-631-765-11	(F311R)...PC BOARD, VOL LEDS (F411RA)...PC BOARD, LED	
9	4-916-729-01	(F411RA)...KNOB (DIA.29)		902	*1-631-759-11	PC BOARD, HP	
10	4-928-635-01	SCREW, +BV (2.6X8) TAPPING		903	*1-631-764-11	PC BOARD, SIRCS	
11	*4-921-389-01	HOUSE		904	*A-4334-255-A *A-4334-320-A	(F311R)...MOUNTED PCB, CONT (F411RA)...MOUNTED PCB, CONT	
				905	*1-631-771-11	PC BOARD, SW	
				906	*1-631-758-11	(F311R)...PC BOARD, SP PUSH	

Parts with part number ending in -X may be different from those specified in the original set.

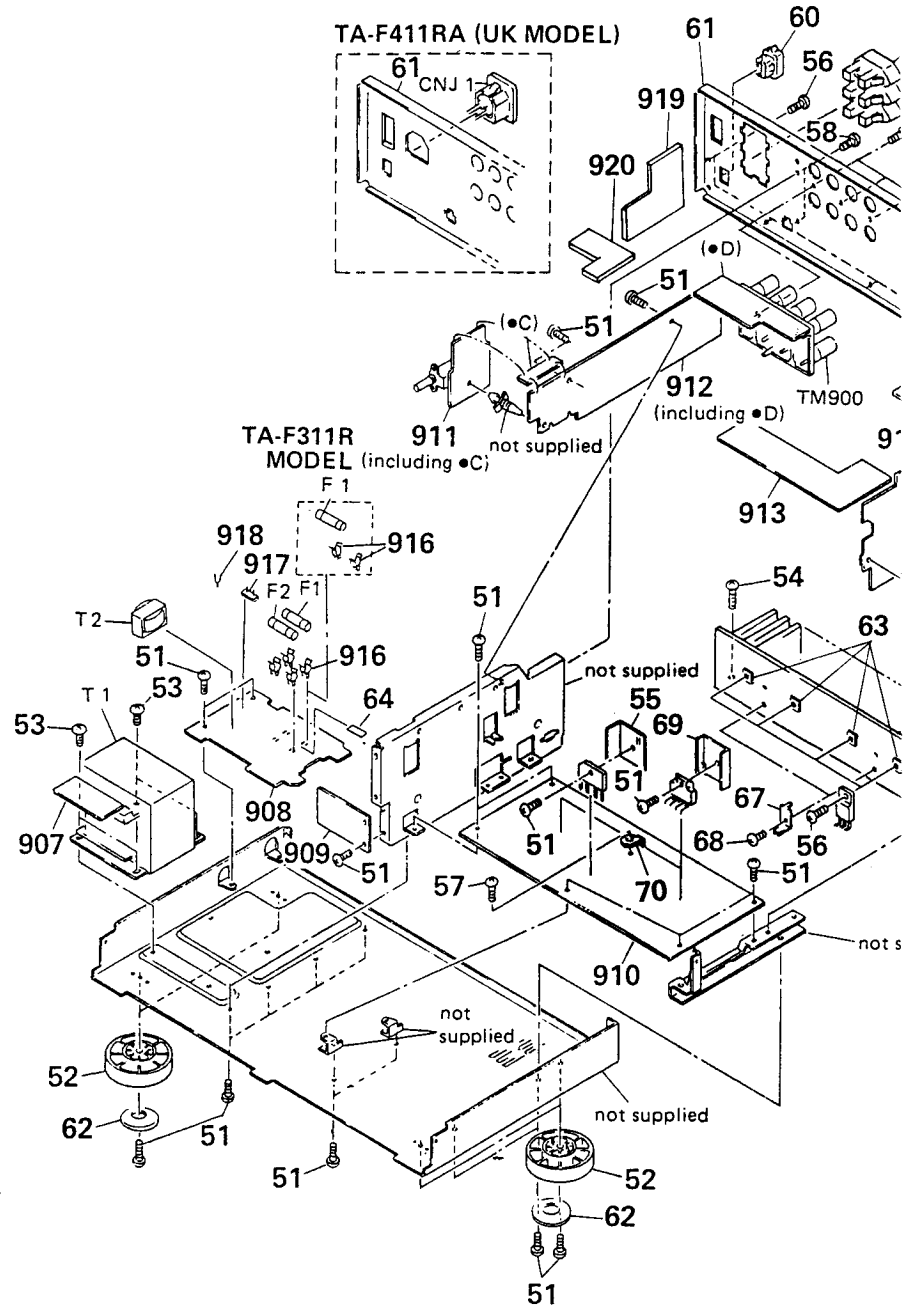
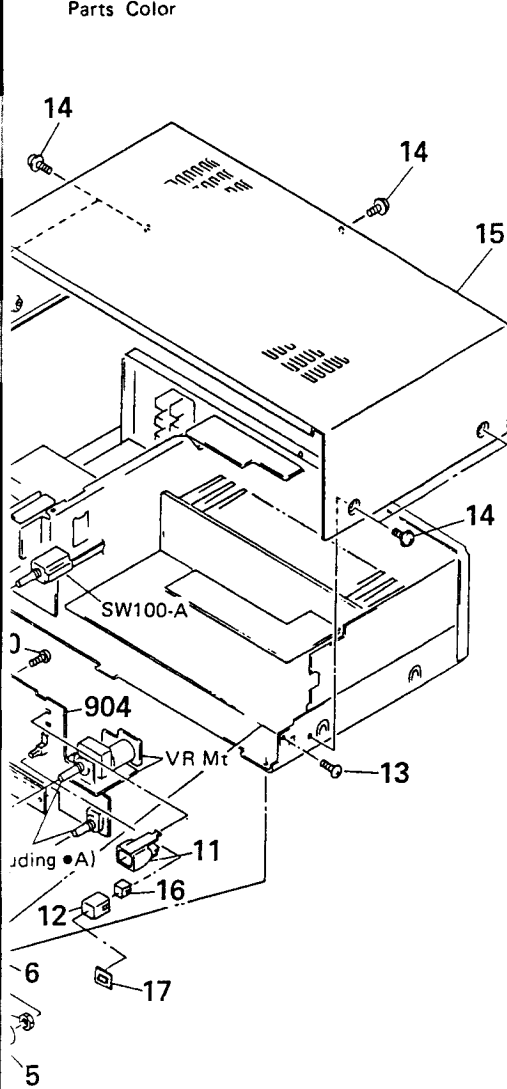
Appearance Parts

PLATE (WHITE)

↑
Parts Color

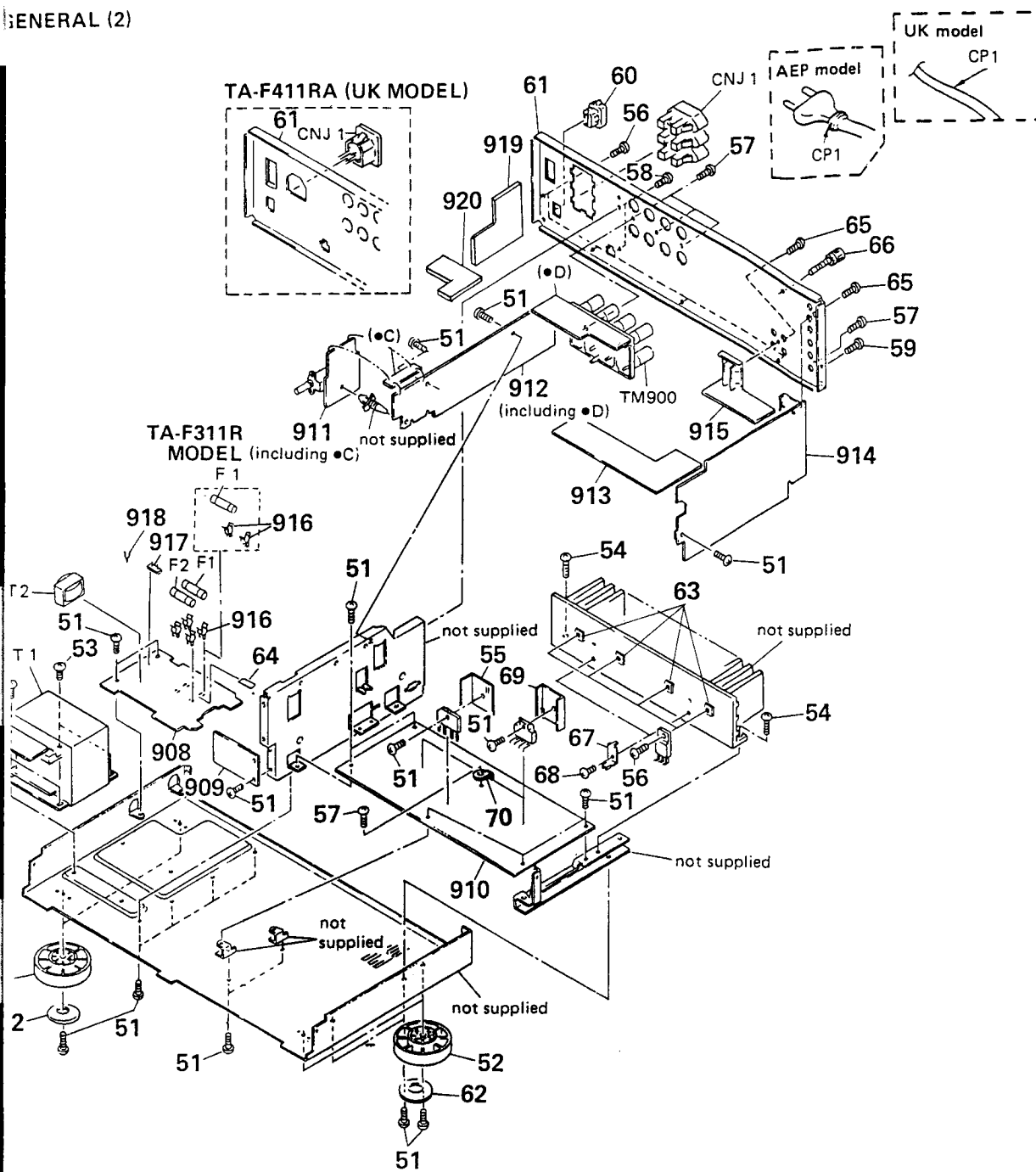
The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

2. GENERAL (2)



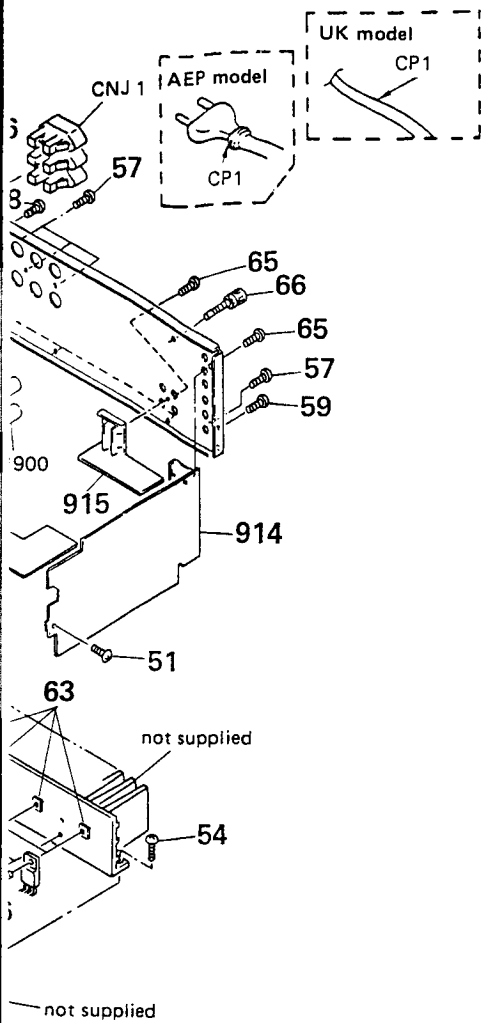
Part No.	Description	Remarks
4-908-875-01	KNOB, SQUARE	
7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
3-704-366-01	SCREW (CASE) (M3X8)	
4-929-294-11	CASE	
4-864-307-00	RING	
4-929-284-01	PLATE, INDICATION	
4-908-848-01	EMBLEM, SONY	
*1-631-777-11	(F311R)...PC BOARD, VOL LEDS	
*1-631-765-11	(F411RA)...PC BOARD, LED	
*1-631-759-11	PC BOARD, HP	
*1-631-764-11	PC BOARD, SIRCS	
*A-4334-255-A	(F311R)...MOUNTED PCB, CONT	
*A-4334-320-A	(F411RA)...MOUNTED PCB, CONT	
*1-631-771-11	PC BOARD, SW	
*1-631-758-11	(F311R)...PC BOARD, SP PUSH	

For Service Manuals Contact
MAURITRON TECHNICAL SERVICES
 8 Cherry Tree Rd, Chinnor
 Oxon OX9 4QY
 Tel:- 01844-351694 Fax:- 01844-352554
 Email:- enquiries@mauritron.co.uk





No.	Part No.
51	7-682-548-
52	X-3304-938
53	7-682-560-
54	7-682-548-
55	*4-931-903-
56	7-682-950-
57	7-685-646-
58	7-682-547-
59	7-685-646-
60	*3-703-244-
61	*4-931-910- *4-931-975- *4-931-975-
62	4-923-836-
63	4-911-232-
64	3-701-947-
65	7-621-849-
66	3-706-165-
67	*4-929-285-
68	7-682-546-
69	*4-931-998-
70	4-870-539-
907	*1-631-763-
908	*1-631-770-
909	*1-631-767-
910	*A-4334-249 *A-4334-309
911	*1-631-761-
912	*1-631-760-
913	*1-631-762-
914	*A-4334-253 *A-4334-317
915	*1-631-768-
916	1-533-213-
917	1-535-139-
918	*1-535-771-
919	*1-634-634-
920	*1-634-637-
CNJ1	1-526-794-
CNJ1	1-526-751-
CP1	△.1-555-750-
CP1	△.1-558-946-
F1	△.1-532-285-
F2	△.1-532-286-
F821	△.1-532-325-
F822	△.1-532-325-
T1	△.1-450-059-
T1	△.1-450-062-
T2	△.1-449-297-

Note: The comp
line with m
Replace on



No.	Part No.	Description	Remarks
51	7-682-548-04	SCREW +BVTT 3X8 (S)	
52	X-3304-938-2	FOOT ASSY	
53	7-682-560-04	SCREW +BVTT 4X6 (S)	
54	7-682-548-04	SCREW +BVTT 3X8 (S)	
55	*4-931-903-01	(F411RA)...HEAT SINK (D1)	
56	7-682-950-01	SCREW +PSW 3X12	
57	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
58	7-682-547-09	SCREW +BVTT 3X6 (S)	
59	7-685-646-19	SCREW +BVTT 3X8	
60	*3-703-244-00	BUSHING (2104), CORD	
61	*4-931-910-32	(F311R).....PANEL, BACK	
	*4-931-975-21	(F411RA:AEP)...PANEL, BACK	
	*4-931-975-41	(F411RA:UK)...PANEL, BACK	
62	4-923-836-11	CUSHION	
63	4-911-232-01	SHEET, INSULATING	
64	3-701-947-12	(F311R)....LABEL (T1.25A), FUSE	
65	7-621-849-00	SCREW, TAPPING	
66	3-706-165-00	SCREW	
67	*4-929-285-01	BRACKET (TR)	
68	7-682-546-01	SCREW +B 3X5	
69	*4-931-998-11	(F311R)...HEAT SINK (S)	
70	4-870-539-00	PLATE, GROUND	
907	*1-631-763-11	(F311R)....PC BOARD, TRANS	
908	*1-631-770-11	PC BOARD, FUSE	
909	*1-631-767-11	PC BOARD, SEALED	
910	*A-4334-249-A	(F311R)....MOUNTED PCB, AMP	
	*A-4334-309-A	(F411RA)...MOUNTED PCB, AMP	
911	*1-631-761-11	(F411RA)...PC BOARD, SP ROTE	
912	*1-631-760-11	PC BOARD, SP TM	
913	*1-631-762-11	PC BOARD, JOINT	
914	*A-4334-253-A	(F311R)....MOUNTED PCB, FUNC	
	*A-4334-317-A	(F411RA)...MOUNTED PCB, FUNC	
915	*1-631-768-11	PC BOARD, TAPE2	
916	1-533-213-31	HOLDER, FUSE	
917	1-535-139-00	BASE POST 22MM (10MM PITCH) 2P	
918	*1-535-771-11	TERMINAL	
919	*1-634-634-11	(F411RA)...PC BOARD, 4.8 SWITCH	
920	*1-634-637-11	(F411RA)...PC BOARD, TRANS (B)	
CNJ1	1-526-794-11	(AEP)...OUTLET, AC	
CNJ1	1-526-751-11	(UK)...OUTLET, AC	
CP1	△.1-555-750-00	(AEP)...CORD, POWER	
CP1	△.1-558-946-11	(UK)...CORD, POWER	
F1	△.1-532-285-00	(F311R)...FUSE, TIME-LAG (T1.25A)	
F2	△.1-532-286-00	(AEP)...FUSE, TIME-LAG (T2.5A)	
F821	△.1-532-325-00	(F411RA)...FUSE, TIME-LAG (T6.3A)	
F822	△.1-532-325-00	(F411RA)...FUSE, TIME-LAG (T6.3A)	
T1	△.1-450-059-11	(F311R)...TRANSFORMER, POWER	
T1	△.1-450-062-11	(F411RA)...TRANSFORMER, POWER	
T2	△.1-449-297-11	TRANSFORMER, POWER	

Note: The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

For Service Manuals Contact
MAURITRON TECHNICAL SERVICES
 8 Cherry Tree Rd, Chinnor
 Oxon OX9 4QY
 Tel: 01844-351699 Fax: 01844-352554
 Email: enquiries@mauritron.co.uk

SECTION 6 ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

MF: μ F, PF: μ F.

RESISTORS

- All resistors are in ohms.
- F: nonflammable

COILS

- MMH: mH, UH: μ H

SEMICONDUCTORS

In each case, U: μ , for example:
 UA...: μ A..., UPA...: μ PA...,
 UPC...: μ PC, UPD...: μ PD...



The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Ref.No.	Part No.	Description
901	*1-631-777-11 *1-631-765-11	(F311R)...PC BOARD, VOL LEADS (F411RA)...PC BOARD, LED
902	*1-631-759-11	PC BOARD, HP
903	*1-631-764-11	PC BOARD, SIRCS
904	*A-4334-255-A *A-4334-320-A	(F311R)...MOUNTED PCB, CONT (F411RA)...MOUNTED PCB, CONT
905	*1-631-771-11	PC BOARD, SW
906	*1-631-758-11	(F311R)...PC BOARD, SP PUSH
907	*1-631-763-11 *1-634-635-11	(F311R)...PC BOARD, TRANS (F411RA)...PC BOARD, TRANS (A)
908	*1-631-770-11	PC BOARD, FUSE
909	*1-631-767-11	PC BOARD, SEALED
910	*A-4334-249-A *A-4334-309-A	(F311R)...MOUNTED PCB, AMP (F411RA)...MOUNTED PCB, AMP
911	*1-631-761-11	(F411RA)...PC BOARD, SP ROTE
912	*1-631-760-11	PC BOARD, SP TM
913	*1-631-762-11	PC BOARD, JOINT
914	*A-4334-253-A *A-4334-317-A	(F311R)...MOUNTED PCB, FUNC (F411RA)...MOUNTED PCB, FUNC
915	*1-631-768-11	PC BOARD, TAPE2
916	1-533-213-31	HOLDER, FUSE
917	1-535-139-00	BASE POST 22MM (10MM PITCH) 2P
918	*1-535-771-11	TERMINAL
919	*1-634-634-11	(F411RA)...PC BOARD, 4.8 SWITCH
920	*1-634-637-11	(F411RA)...PC BOARD, TRANS (B)
C1	1-161-744-00	CERAMIC 0.01MF 400V
C108	1-162-284-31	CERAMIC 150PF 10% 50V
C110	1-126-233-11	(F311R)...ELECT 22MF 20% 50V
C110	1-126-049-11	(F411RA)...ELECT 22MF 20% 50V
C111	1-124-477-11	(F311R)...ELECT 47MF 20% 16V
C111	1-126-022-11	(F411RA)...ELECT 47MF 20% 25V
C112	1-162-284-31	CERAMIC 150PF 10% 50V
C113	1-130-480-00	MYLAR 0.0056MF 5% 50V
C114	1-130-473-00	MYLAR 0.0015MF 5% 50V
C115	1-124-902-00	(F311R)...ELECT 0.47MF 20% 50V
C115	1-126-043-11	(F411RA)...ELECT 0.47MF 20% 50V
C116	1-124-472-11	(F311R)...ELECT 470MF 20% 10V
C116	1-124-997-11	(F411RA)...ELECT 470MF 20% 10V
C150	1-124-925-11	(F311R)...ELECT 2.2MF 20% 50V
C208	1-162-284-31	CERAMIC 150PF 10% 50V
C210	1-126-233-11	(F311R)...ELECT 22MF 20% 50V
C210	1-126-049-11	(F411RA)...ELECT 22MF 20% 50V

Ref.No.	Part No.	Description
C211	1-124-477-11	(F311R)...ELECT 47MF 20% 16V
C211	1-126-022-11	(F411RA)...ELECT 47MF 20% 25V
C212	1-162-284-31	CERAMIC 150PF 10% 50V
C213	1-130-480-00	MYLAR 0.0056MF 5% 50V
C214	1-130-473-00	MYLAR 0.0015MF 5% 50V
C215	1-124-902-00	(F311R)...ELECT 0.47MF 20% 50V
C215	1-126-043-11	(F411RA)...ELECT 0.47MF 20% 50V
C216	1-124-472-11	(F311R)...ELECT 470MF 20% 10V
C216	1-124-997-11	(F411RA)...ELECT 470MF 20% 10V
C301	1-130-481-00	MYLAR 0.0068MF 5% 50V
C302	1-130-474-00	MYLAR 0.0018MF 5% 50V
C303	1-136-159-00	FILM 0.033MF 5% 50V
C304	1-130-479-00	MYLAR 0.0047MF 5% 50V
C401	1-130-481-00	MYLAR 0.0068MF 5% 50V
C402	1-130-474-00	MYLAR 0.0018MF 5% 50V
C403	1-136-159-00	FILM 0.033MF 5% 50V
C404	1-130-479-00	MYLAR 0.0047MF 5% 50V
C500	1-124-927-11	ELECT 4.7MF 20% 50V
C501	1-126-233-11	(F311R)...ELECT 22MF 20% 50V
C501	1-126-049-11	(F411RA)...ELECT 22MF 20% 50V
C502	1-124-478-11	(F311R)...ELECT 100MF 20% 25V
C502	1-126-023-11	(F411RA)...ELECT 100MF 20% 25V
C503	1-101-804-00	CERAMIC 10PF 5% 500V
C504	1-136-163-00	FILM 0.068MF 5% 50V
C505	1-124-477-11	ELECT 47MF 20% 16V
C506	1-136-163-00	FILM 0.068MF 5% 50V
C507	1-136-163-00	FILM 0.068MF 5% 50V
C600	1-124-927-11	ELECT 4.7MF 20% 50V
C601	1-126-233-11	(F311R)...ELECT 22MF 20% 50V
C601	1-126-049-11	(F411RA)...ELECT 22MF 20% 50V
C602	1-124-478-11	(F311R)...ELECT 100MF 20% 25V
C602	1-126-023-11	(F411RA)...ELECT 100MF 20% 25V
C603	1-101-804-00	CERAMIC 10PF 5% 500V
C604	1-136-163-00	FILM 0.068MF 5% 50V
C605	1-124-477-11	ELECT 47MF 20% 16V
C606	1-136-163-00	FILM 0.068MF 5% 50V
C607	1-136-163-00	FILM 0.068MF 5% 50V
C700	1-162-284-31	CERAMIC 150PF 10% 50V
C701	1-162-284-31	CERAMIC 150PF 10% 50V
C702	1-164-097-11	CERAMIC 0.022MF 50V
C703	1-161-494-00	CERAMIC 0.022MF 30% 25V
C704	1-130-471-00	MYLAR 0.001MF 5% 50V
C706	1-136-157-00	FILM 0.022MF 5% 50V
C707	1-124-473-11	ELECT 1000MF 20% 10V

Ref.No.	Part No.	Description			
C708	1-164-097-11	CERAMIC	0.022MF		50V
C709	1-124-446-11	ELECT	47MF	20%	10V
C711	1-162-306-11	CERAMIC	0.01MF	20%	16V
C712	1-162-306-11	CERAMIC	0.01MF	20%	16V
C713	1-162-306-11	CERAMIC	0.01MF	20%	16V
C714	1-136-164-00	FILM	0.082MF	5%	50V
C716	1-124-768-11	ELECT	4.7MF	20%	50V
C750	1-123-875-11	ELECT	10MF	20%	50V
C751	1-123-875-11	ELECT	10MF	20%	50V
C752	1-136-159-00	FILM	0.033MF	5%	50V
C753	1-136-159-00	FILM	0.033MF	5%	50V
C754	1-136-159-00	FILM	0.033MF	5%	50V
C756	1-161-494-00	CERAMIC	0.022MF		25V
C800	1-123-875-11	ELECT	10MF	20%	50V
C801	1-124-925-11	ELECT	2.2MF	20%	50V
C802	1-126-176-11	ELECT	220MF	20%	6.3V
C803	1-123-875-11	ELECT	10MF	20%	50V
C804	1-124-478-11	(F311R)...ELECT	100MF	20%	25V
C804	1-126-101-11	(F411RA)...ELECT	100MF	20%	16V
C821	1-136-163-00	(F411RA)...FILM	0.068MF	5%	50V
C822	1-136-163-00	(F411RA)...FILM	0.068MF	5%	50V
C823	1-124-911-11	(F411RA)...ELECT	220MF	20%	50V
C900	1-126-224-11	(F311R)...ELECT	4700MF	20%	42V
C900	1-125-574-11	(F411RA)...ELECT	820MF	20%	56V
C901	1-126-224-11	(F311R)...ELECT	4700MF	20%	42V
C901	1-125-574-11	(F411RA)...ELECT	820MF	20%	56V
C902	1-124-913-11	(F311R)...ELECT	470MF	20%	50V
C902	1-126-067-11	(F411RA)...ELECT	1000MF	20%	63V
C903	1-124-913-11	(F311R)...ELECT	470MF	20%	50V
C903	1-126-067-11	(F411RA)...ELECT	1000MF	20%	63V
C904	1-126-233-11	(F311R)...ELECT	22MF	20%	50V
C904	1-124-916-11	(F411RA)...ELECT	22MF	20%	63V
C905	1-126-233-11	(F311R)...ELECT	22MF	20%	50V
C905	1-124-916-11	(F411RA)...ELECT	22MF	20%	63V
C906	1-126-233-11	(F311R)...ELECT	22MF	20%	50V
C906	1-124-916-11	(F411RA)...ELECT	22MF	20%	63V
C907	1-126-233-11	(F311R)...ELECT	22MF	20%	50V
C907	1-124-916-11	(F411RA)...ELECT	22MF	20%	63V
C908	1-102-394-11	CERAMIC	0.01MF		250V
C910	1-124-557-11	(F311R)...ELECT	1000MF	20%	25V
C910	1-126-027-11	(F411RA)...ELECT	1000MF	20%	25V
C911	1-124-557-11	(F311R)...ELECT	1000MF	20%	25V
C911	1-126-027-11	(F411RA)...ELECT	1000MF	20%	25V
C912	1-126-103-11	(F311R)...ELECT	470MF	20%	16V
C912	1-126-012-11	(F411RA)...ELECT	470MF	20%	16V
C913	1-126-103-11	(F311R)...ELECT	470MF	20%	16V
C913	1-126-012-11	(F411RA)...ELECT	470MF	20%	16V
C914	1-136-153-00	FILM	0.01MF	5%	50V
C915	1-124-480-11	ELECT	470MF	20%	25V
C916	1-123-875-11	ELECT	10MF	20%	50V
C919	1-136-163-00	FILM	0.068MF	5%	50V
C920	1-136-163-00	FILM	0.068MF	5%	50V
C950	1-124-791-11	ELECT	1MF	20%	50V

Ref.No.	Part No.	Description
CNJ1	1-526-794-11	(AEP)...OUTLET, AC
CNJ1	1-526-751-11	(UK)...OUTLET, AC
CNJ500*1-564-338-00		PIN, CONNECTOR 4P
CNJ700*1-561-651-00		SOCKET, CONNECTOR 7P
CNJ701*1-561-650-00		SOCKET, CONNECTOR 5P
CNJ702*1-568-648-11		SOCKET, CONNECTOR 15P
CNJ703	1-568-646-11	SOCKET,CONNECTOR (PC BOARD)15P
CNJ710	1-566-213-11	PIN, CONNECTOR 4P
CNJ900	1-508-693-00	CONNECTOR PIN 10P
CNP500*1-564-505-11		PLUG, CONNECTOR 2P
CNP600*1-564-505-11		PLUG, CONNECTOR 2P
CNP700*1-565-366-11		PIN, CONNECTOR (PC BOARD) 7P
CNP701*1-565-367-11		PIN, CONNECTOR (PC BOARD) 5P
CNP702*1-568-647-11		PIN, CONNECTOR 15P
CNP703	1-568-645-11	1IN, CONNECTOR (PC BOARD) 15P
CNP704*1-564-505-11		PLUG, CONNECTOR 2P
CNP710*1-564-339-00		PIN, CONNECTOR 5P
CNP750*1-564-505-11		PLUG, CONNECTOR 2P
CP1	△.1-555-750-00	(AEP)...CORD, POWER
CP1	△.1-558-946-11	(UK)...CORD, POWER
D501	8-719-815-85	DIODE 1S1585
D502	8-719-815-85	DIODE 1S1585
D601	8-719-815-85	DIODE 1S1585
D602	8-719-815-85	DIODE 1S1585
D700	8-719-914-12	ZENER DIODE HZ4BL
D701	8-719-912-20	DIODE 1SS120
D702	8-719-200-77	DIODE 10E2N
D704	8-719-303-00	LED SEL2510C
D705	8-719-912-20	DIODE 1SS120
D706	8-719-912-20	DIODE 1SS120
D707	8-719-912-20	DIODE 1SS120
D708	8-719-912-20	DIODE 1SS120
D709	8-719-912-20	DIODE 1SS120
D710	8-719-912-20	DIODE 1SS120
D711	8-719-912-20	DIODE 1SS120
D712	8-719-912-20	DIODE 1SS120
D713	8-719-912-20	DIODE 1SS120
D714	8-719-912-20	DIODE 1SS120
D715	8-719-302-07	LED SEL1810A (TAPE2/DAT)
D716	8-719-312-31	LED SEL1515C-CD (TAPE1)
D717	8-719-312-31	LED SEL1515C-CD (VIDEO/AUX)
D718	8-719-312-31	LED SEL1515C-CD (CD)
D719	8-719-312-31	LED SEL1515C-CD (TUNER)
D720	8-719-312-31	LED SEL1515C-CD (PHONO)
D721	8-719-933-33	ZENER DIODE HZS6A11
D722	8-719-304-14	LED SEL2510W (DIRECT)
D723	8-719-304-14	LED SEL2510W (DIRECT)
D724	8-719-301-38	LED SEL2210S (POWER)
D725	8-719-912-20	DIODE 1SS120
D750	8-719-912-20	DIODE 1SS120
D751	8-719-912-20	(F411RA)...DIODE 1SS120
D752	8-719-912-20	(F411RA)...DIODE 1SS120
D753	8-719-912-20	(F411RA)...DIODE 1SS120
D754	8-719-912-20	(F411RA)...DIODE 1SS120
D755	8-719-912-20	(F411RA)...DIODE 1SS120
D756	8-719-912-20	DIODE 1SS120

Note: The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

Ref.No.	Part No.	Description
D757	8-719-200-77	DIODE 10E2N
D758	8-719-912-20	DIODE 1SS120
D800	8-719-200-77	DIODE 10E2N
D801	8-719-912-20	DIODE 1SS120
D802	8-719-912-20	DIODE 1SS120
D821	8-719-200-77	(F411RA)...DIODE 10E2N
D822	8-719-200-77	(F411RA)...DIODE 10E2N
D900	8-719-312-09	DIODE RBA-402
D901	8-719-200-77	DIODE 10E2N
D902	8-719-200-77	DIODE 10E2N
D903	8-719-200-77	DIODE 10E2N
D904	8-719-200-77	DIODE 10E2N
D905	8-719-200-77	DIODE 10E2N
D906	8-719-200-77	DIODE 10E2N
D907	8-719-200-77	DIODE 10E2N
D908	8-719-200-77	DIODE 10E2N
D909	8-719-511-40	DIODE 1VVB40
D913	8-719-912-20	DIODE 1SS120
D914	8-719-912-20	DIODE 1SS120
F1	△.1-532-285-00	(F311R)...FUSE, TIME-LAG (T1.25A)
F2	△.1-532-286-00	(AEP).....FUSE, TIME-LAG (T2.5A)
F821	△.1-532-325-00	(F411RA)...FUSE, TIME-LAG (T6.3A)
F822	△.1-532-325-00	(F411RA)...FUSE, TIME-LAG (T6.3A)
IC101	8-759-600-02	IC M5218L
IC102	8-759-800-37	IC LC4066BH
IC501	8-759-109-06	IC UPC1298V
IC601	8-759-109-06	IC UPC1298V
IC700	8-759-632-61	IC M50761-258P
IC701	8-759-802-52	IC LC7818
IC702	8-749-920-83	IC GP1U52XB
IC800	8-759-111-68	IC UPC1237HA
IC900	8-759-604-29	IC MSF7805
IC901	8-759-982-10	IC RC7809FA
IC902	8-759-604-49	IC MSF7909
J100	1-565-320-11	JACK, PIN 6P
J101	1-565-320-11	JACK, PIN 6P
J102	1-568-529-21	JACK, PIN 4P
J900	1-507-863-51	JACK, LARGE TYPE
L500	*1-420-872-00	COIL, AIR CORE
L600	*1-420-872-00	COIL, AIR CORE
Q101	8-729-900-63	TRANSISTOR DTA124ES
Q102	8-729-900-36	TRANSISTOR DTC124ES
Q500	8-729-141-26	TRANSISTOR 2SC3622A-LK
Q501	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q502	8-729-321-99	(F411RA)...TRANSISTOR 2SC3854LF-0Y
Q502	8-729-322-08	(F311R)...TRANSISTOR 2SC3853LF-0Y
Q503	8-729-322-05	(F411RA)...TRANSISTOR 2SA1490LF-0Y
Q503	8-729-322-11	(F311R)...TRANSISTOR 2SA1489LF-0Y
Q504	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA
Q600	8-729-141-26	TRANSISTOR 2SC3622A-LK
Q601	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q602	8-729-321-99	(F411RA)...TRANSISTOR 2SC3854LF-0Y
Q602	8-729-322-08	(F311R)...TRANSISTOR 2SC3853LF-0Y
Q603	8-729-322-05	(F411RA)...TRANSISTOR 2SA1490LF-0Y
Q603	8-729-322-11	(F311R)...TRANSISTOR 2SA1489LF-0Y
Q604	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA
Q700	8-729-620-05	TRANSISTOR 2SC2603-EF
Q701	8-729-620-05	TRANSISTOR 2SC2603-EF

Ref.No.	Part No.	Description			
Q702	8-729-620-05	TRANSISTOR 2SC2603-EF			
Q703	8-729-620-05	TRANSISTOR 2SC2603-EF			
Q704	8-729-900-63	TRANSISTOR DTA124ES			
Q705	8-729-620-05	TRANSISTOR 2SC2603-EF			
Q706	8-729-620-05	TRANSISTOR 2SC2603-EF			
Q707	8-729-900-63	TRANSISTOR DTA124ES			
Q708	8-729-900-63	TRANSISTOR DTA124ES			
Q709	8-729-900-63	TRANSISTOR DTA124ES			
Q710	8-729-900-63	(F411RA)...TRANSISTOR DTA124ES			
Q711	8-729-900-63	(F411RA)...TRANSISTOR DTA124ES			
Q712	8-729-900-63	TRANSISTOR DTA124ES			
Q713	8-729-900-63	TRANSISTOR DTA124ES			
Q714	8-729-900-36	TRANSISTOR DTC124ES			
Q715	8-729-111-29	TRANSISTOR 2SD1616A-K			
Q716	8-729-118-01	TRANSISTOR 2SB1116			
Q717	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q750	8-729-900-63	TRANSISTOR DTA124ES			
Q751	8-729-900-63	TRANSISTOR DTA124ES			
Q761	8-729-900-80	TRANSISTOR DTC114ES			
Q762	8-729-900-80	TRANSISTOR DTC114ES			
Q800	8-729-900-63	TRANSISTOR DTA124ES			
Q900	8-729-920-98	TRANSISTOR 2SD1761-EF			
Q901	8-729-920-97	TRANSISTOR 2SB1187-EF			
R102	1-249-417-11	CARBON	1K	5%	1/4W
R104	1-249-417-11	CARBON	1K	5%	1/4W
R108	1-249-418-11	CARBON	1.2K	5%	1/4W
R109	1-249-441-11	CARBON	100K	5%	1/4W
R111	1-249-441-11	CARBON	100K	5%	1/4W
R112	1-249-416-11	CARBON	820	5%	1/4W
R113	1-247-897-11	CARBON	560K	5%	1/4W
R114	1-249-437-11	CARBON	47K	5%	1/4W
R115	1-249-441-11	CARBON	100K	5%	1/4W
R116	1-249-409-11	CARBON	220	5%	1/4W
R117	1-249-405-11	CARBON	100	5%	1/4W
R118	1-249-405-11	CARBON	100	5%	1/4W
R119	1-249-433-11	(F311R)...CARBON	22K	5%	1/4W
R120	1-249-433-11	(F311R)...CARBON	22K	5%	1/4W
R150	1-249-441-11	(F311R)...CARBON	100K	5%	1/4W
R202	1-249-417-11	CARBON	1K	5%	1/4W
R204	1-249-417-11	CARBON	1K	5%	1/4W
R208	1-249-418-11	CARBON	1.2K	5%	1/4W
R209	1-249-441-11	CARBON	100K	5%	1/4W
R211	1-249-441-11	CARBON	100K	5%	1/4W
R212	1-249-416-11	CARBON	820	5%	1/4W
R213	1-247-897-11	CARBON	560K	5%	1/4W
R214	1-249-437-11	CARBON	47K	5%	1/4W
R215	1-249-441-11	CARBON	100K	5%	1/4W
R216	1-249-409-11	CARBON	220	5%	1/4W
R217	1-249-405-11	CARBON	100	5%	1/4W
R218	1-249-405-11	CARBON	100	5%	1/4W
R301	1-247-903-00	CARBON	1M	5%	1/4W
R302	1-249-421-11	CARBON	2.2K	5%	1/4W
R303	1-249-426-11	CARBON	5.6K	5%	1/4W
R304	1-247-903-00	CARBON	1M	5%	1/4W
R305	1-247-852-11	CARBON	7.5K	5%	1/4W
R306	1-247-870-11	CARBON	43K	5%	1/4W
R307	1-249-436-11	CARBON	39K	5%	1/4W
R308	1-249-437-11	CARBON	47K	5%	1/4W
R401	1-247-903-00	CARBON	1M	5%	1/4W

Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Ref.No.	Part No.	Description					
R402	1-249-421-11	CARBON	2.2K	5%	1/4W		
R403	1-249-426-11	CARBON	5.6K	5%	1/4W		
R404	1-247-903-00	CARBON	1M	5%	1/4W		
R405	1-247-852-11	CARBON	7.5K	5%	1/4W		
R406	1-247-870-11	CARBON	43K	5%	1/4W		
R407	1-249-436-11	CARBON	39K	5%	1/4W		
R408	1-249-437-11	CARBON	47K	5%	1/4W		
R500	1-249-417-11	(F311R)...CARBON	1K	5%	1/4W		
R500	1-247-713-11	(F411RA)...CARBON	1K	5%	1/4W		
R501	1-249-417-11	(F311R)...CARBON	1K	5%	1/4W		
R501	1-247-713-11	(F411RA)...CARBON	1K	5%	1/4W		
R502	1-249-423-11	CARBON	3.3K	5%	1/4W		
R503	1-249-441-11	(F311R)...CARBON	100K	5%	1/4W		
R503	1-249-469-11	(F411RA)...CARBON	100K	5%	1/4W		
R504	1-249-416-11	(F311R)...CARBON	820	5%	1/4W		
R504	1-247-711-11	(F411RA)...CARBON	680	5%	1/4W		
R505	1-249-441-11	CARBON	100K	5%	1/4W		
R506	1-249-431-11	CARBON	15K	5%	1/4W		
R507	1-249-419-11	CARBON	1.5K	5%	1/4W		
R508	1-249-423-11	CARBON	3.3K	5%	1/4W		
R509	△1-247-688-11	CARBON	10	5%	1/4W	F	
R510	△1-247-688-11	CARBON	10	5%	1/4W	F	
R511	△1-216-361-00	METAL OXIDE	0.22	5%	2W	F	
R512	△1-216-361-00	METAL OXIDE	0.22	5%	2W	F	
R513	1-249-428-11	(F311R)...CARBON	8.2K	5%	1/4W		
R513	1-249-434-11	(F411RA)...CARBON	27K	5%	1/4W		
R514	1-247-727-11	CARBON	10	5%	1/2W		
R515	1-249-437-11	CARBON	47K	5%	1/4W		
R516	1-247-727-11	CARBON	10	5%	1/2W		
R519	△1-247-704-11	CARBON	220	5%	1/4W	F	
R520	△1-247-745-11	(F311R)...CARBON	330	5%	1/2W		
R520	△1-215-867-00	(F411RA)...METAL OXIDE	470	5%	1W		
R521	△1-216-361-00	(F411RA)...METAL OXIDE	0.22	5%	2W		
R522	△1-216-361-00	(F411RA)...METAL OXIDE	0.22	5%	2W		
R523	1-249-423-11	CARBON	3.3K	5%	1/4W		
R600	1-249-417-11	(F311R)...CARBON	1K	5%	1/4W		
R600	1-247-713-11	(F411RA)...CARBON	1K	5%	1/4W		
R601	1-249-417-11	(F311R)...CARBON	1K	5%	1/4W		
R601	1-247-713-11	(F411RA)...CARBON	1K	5%	1/4W		
R602	1-249-423-11	CARBON	3.3K	5%	1/4W		
R603	1-249-441-11	(F311R)...CARBON	100K	5%	1/4W		
R603	1-249-469-11	(F411RA)...CARBON	100K	5%	1/4W		
R604	1-249-416-11	(F311R)...CARBON	820	5%	1/4W		
R604	1-247-711-11	(F411RA)...CARBON	680	5%	1/4W		
R605	1-249-441-11	CARBON	100K	5%	1/4W		
R606	1-249-431-11	CARBON	15K	5%	1/4W		
R607	1-249-419-11	CARBON	1.5K	5%	1/4W		
R608	1-249-423-11	CARBON	3.3K	5%	1/4W		
R609	△1-247-688-11	CARBON	10	5%	1/4W	F	
R610	△1-247-688-11	CARBON	10	5%	1/4W	F	
R611	△1-216-361-00	METAL OXIDE	0.22	5%	2W	F	
R612	△1-216-361-00	METAL OXIDE	0.22	5%	2W	F	
R613	1-249-428-11	(F311R)...CARBON	8.2K	5%	1/4W		
R613	1-249-434-11	(F411RA)...CARBON	27K	5%	1/4W		

Ref.No.	Part No.	Description					
R614	1-247-727-11	CARBON	10	5%	1/2W		
R615	1-249-438-11	CARBON	56K	5%	1/4W		
R616	1-247-727-11	CARBON	10	5%	1/2W		
R619	△1-247-704-11	CARBON	220	5%	1/4W	F	
R620	△1-247-745-11	(F311R)...CARBON	330	5%	1/2W		
R620	△1-215-867-00	(F411RA)...METAL OXIDE	470	5%	1W		
R621	△1-216-361-00	(F411RA)...METAL OXIDE	0.22	5%	2W		
R622	△1-216-361-00	(F411RA)...METAL OXIDE	0.22	5%	2W		
R623	1-249-423-11	CARBON	3.3K	5%	1/4W		
R700	1-249-423-11	CARBON	3.3K	5%	1/4W		
R701	1-247-903-00	CARBON	1M	5%	1/4W		
R702	1-249-417-11	CARBON	1K	5%	1/4W		
R703	1-249-441-11	CARBON	100K	5%	1/4W		
R704	1-249-433-11	CARBON	22K	5%	1/4W		
R705	1-249-429-11	CARBON	10K	5%	1/4W		
R706	1-249-441-11	CARBON	100K	5%	1/4W		
R707	1-249-433-11	CARBON	22K	5%	1/4W		
R708	1-249-417-11	CARBON	1K	5%	1/4W		
R709	1-249-393-11	CARBON	10	5%	1/4W		
R710	1-249-429-11	CARBON	10K	5%	1/4W		
R711	1-249-417-11	CARBON	1K	5%	1/4W		
R712	1-249-429-11	CARBON	10K	5%	1/4W		
R713	1-249-429-11	CARBON	10K	5%	1/4W		
R714	1-249-433-11	CARBON	22K	5%	1/4W		
R715	1-249-433-11	CARBON	22K	5%	1/4W		
R716	1-249-433-11	CARBON	22K	5%	1/4W		
R717	1-249-433-11	CARBON	22K	5%	1/4W		
R718	1-249-433-11	CARBON	22K	5%	1/4W		
R719	1-249-433-11	CARBON	22K	5%	1/4W		
R720	1-249-433-11	CARBON	22K	5%	1/4W		
R721	1-249-433-11	CARBON	22K	5%	1/4W		
R722	1-249-414-11	CARBON	560	5%	1/4W		
R723	1-249-411-11	CARBON	330	5%	1/4W		
R724	1-249-411-11	CARBON	330	5%	1/4W		
R725	1-249-411-11	CARBON	330	5%	1/4W		
R726	1-249-411-11	CARBON	330	5%	1/4W		
R727	1-249-411-11	CARBON	330	5%	1/4W		
R728	1-249-429-11	CARBON	10K	5%	1/4W		
R729	1-249-429-11	CARBON	10K	5%	1/4W		
R731	1-247-901-11	CARBON	820K	5%	1/4W		
R732	1-249-433-11	CARBON	22K	5%	1/4W		
R733	1-249-433-11	CARBON	22K	5%	1/4W		
R734	1-249-441-11	CARBON	100K	5%	1/4W		
R735	1-249-410-11	CARBON	270	5%	1/4W		
R736	1-249-416-11	CARBON	820	5%	1/4W		
R737	1-249-419-11	CARBON	1.5K	5%	1/4W		
R739	1-249-423-11	CARBON	3.3K	5%	1/4W		
R740	1-249-441-11	CARBON	100K	5%	1/4W		
R742	1-249-423-11	CARBON	3.3K	5%	1/4W		
R743	1-249-409-11	CARBON	220	5%	1/4W		
R744	1-249-412-11	CARBON	390	5%	1/4W		
R745	△1-249-393-11	CARBON	10	5%	1/4W	F	
R746	△1-249-393-11	CARBON	10	5%	1/4W	F	
R747	1-249-433-11	(F411RA)...CARBON	22K	5%	1/4W		
R750	1-249-433-11	CARBON	22K	5%	1/4W		
R761	1-249-425-11	CARBON	4.7K	5%	1/4W		
R800	1-249-439-11	CARBON	68K	5%	1/4W		

Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Ref.No.	Part No.	Description
R801	1-249-429-11	(F311R)...CARBON 10K 5% 1/4W
R801	1-249-430-11	(F411RA)...CARBON 12K 5% 1/4W
R802	1-249-441-11	CARBON 100K 5% 1/4W
R803	1-249-440-11	CARBON 82K 5% 1/4W
R805	△.1-215-865-11	(F311R)...METAL OXIDE 220 5% 1W F
R805	△.1-216-454-11	(F411RA)...METAL OXIDE 390 5% 2W
R806	1-249-427-11	(F311R)...CARBON 6.8K 5% 1/4W
R806	1-249-429-11	(F411RA)...CARBON 10K 5% 1/4W
R900	△.1-249-455-11	CARBON 4.7 5% 1/4W F
R901	△.1-249-455-11	CARBON 4.7 5% 1/4W F
R902	△.1-249-451-11	(F311R)...CARBON 2.2 5% 1/4W F
R902	△.1-217-473-00	(F411RA)...FUSIBLE 2.2 5% 1W
R903	△.1-249-451-11	(F311R)...CARBON 2.2 5% 1/4W F
R903	△.1-217-473-00	(F411RA)...FUSIBLE 2.2 5% 1W
R904	1-249-417-11	CARBON 1K 5% 1/4W
R905	1-249-417-11	CARBON 1K 5% 1/4W
R906	1-247-698-11	CARBON 68 5% 1/4W
R907	1-247-713-11	CARBON 1K 5% 1/4W
R908	1-249-451-11	CARBON 2.2 5% 1/4W
R909	1-249-451-11	CARBON 2.2 5% 1/4W
RV300	1-238-638-11	RES, VAR, CARBON 150K/150K (BALANCE)
RV301	1-238-639-11	RES, VAR 250K/250K (TREBLE)
RV302	1-238-640-11	RES, VAR, CARBON 520K/520K (BASS)
RV303	1-238-628-21	RES, VAR, CARBON (MOTOR)120KX2(VOLUME)
RV500	1-237-455-11	RES, ADJ, CARBON 500
RV600	1-237-455-11	RES, ADJ, CARBON 500
RY1	1-515-516-00	RELAY
RY800	1-515-533-11	(F311R)...RELAY
RY800	1-515-501-11	(F411RA)...RELAY
S821	1-571-309-31	(F411RA)...SWITCH (SPEAKER IMPEDANCE SELECTOR)
SW100	1-571-115-11	(F411RA)...SWITCH, SLIDE (REC OUT SELECTOR)
SW301	1-571-828-11	SWITCH, PUSH (1 KEY)(SOURCE DIRECT)
SW700	1-554-303-21	SWITCH, KEY BOARD (PHONO)
SW701	1-554-303-21	SWITCH, KEY BOARD (TUNER)
SW702	1-554-303-21	SWITCH, KEY BOARD (CD)
SW703	1-554-303-21	SWITCH, KEY BOARD (VIDEO/AUX)
SW704	1-554-303-21	SWITCH, KEY BOARD (TAPE 1)
SW705	1-554-303-21	SWITCH, KEY BOARD (TAPE 2/DAT)
SW706	1-554-303-21	SWITCH, KEY BOARD (SYSTEM POWER)

Ref.No.	Part No.	Description
SW900	1-571-971-11	(F311R)...SWITCH, PUSH (2 KEY) (SPEAKER A/B)
SW900	1-571-973-11	(F411RA)...SWITCH, ROTARY (SPEAKERS)
T1	△.1-450-059-11	(F311R)...TRANSFORMER, POWER
T1	△.1-450-062-11	(F411RA)...TRANSFORMER, POWER
T2	△.1-449-297-11	TRANSFORMER, POWER
TM900	1-537-227-11	(AEP)...TERMINAL BOARD (SP)
TM900	1-537-228-11	(UK)...TERMINAL BOARD (SP)
TP500	*1-535-115-00	TERMINAL
TP600	*1-535-115-00	TERMINAL
X700	1-577-077-11	OSCILLATOR, CERAMIC 400K

ACCESSORY & PACKING MATERIAL

1-465-199-11	REMOTE COMMANDER (RM-S310)
2-128-529-01	COVER, BATTERY
3-751-337-11	MANUAL, INSTRUCTION (ENGLISH,FRENCH,SPANISH,PORTUGUESE)
3-751-337-41	MANUAL, INSTRUCTION (GERMAN,DUTCH,SWEDISH,ITALIAN)
*4-929-260-01	CUSHION
*4-931-991-01	(F311R)...INDIVIDUAL CARTON
*4-931-992-01	(F411RA)...INDIVIDUAL CARTON

Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.