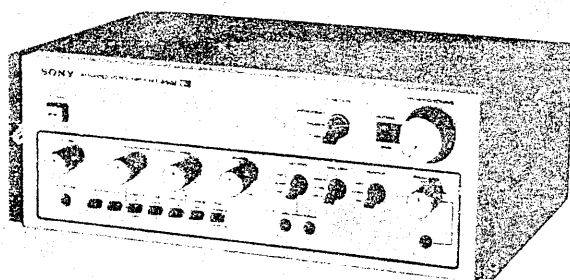


TA-5650

US Model
Canadian Model
UK Model
AEP Model



P691626

Discard TA-5650 service manual previously issued for UK and AEP Models. This service manual contains former information.

INTEGRATED STEREO AMPLIFIER

SPECIFICATIONS

GENERAL

Power Requirements: 120 V ac, 50 Hz (US, Canadian Model)
110, 127, 220 or 240 V ac adjustable, 50/60 Hz (UK and AEP Model)

Power Consumption: 160 W (US Model)
320 VA (Canadian Model)
440 W (UK, AEP Model)

Dimensions: Approx. 460(w) x 168(h) x 323(d) mm
18¹/₈(w) x 6⁵/₈(h) x 12³/₄(d) inches
Including projecting parts and controls

Weight: Approx. 13.4 kg, 29 lb 9 oz (net)
Approx. 16 kg, 35 lb 4 oz (in shipping carton)

Harmonic Distortion: Less than 0.1% at rated output
Less than 0.08% at 1 W output

IM Distortion: Less than 0.1% at rated output
(60 Hz : 7 kHz = 4 : 1)
Less than 0.08% at 1 W output

Frequency Response (at 1 W output): 2 Hz - 100 kHz \pm 0 dB

S/N Ratio: Greater than 110 dB, short-circuited input

Residual Noise: Less than 0.02 μ V (8 Ω)

Damping Factor: 50 (8 Ω , at 1 kHz)

Inputs: POWER INPUT
Sensitivity 1 V RMS (for rated output), impedance 50 k Ω

Outputs: SPEAKER terminals A, B
Accept speakers of 4 Ω or more
HEADPHONES jack
Accepts low and high-impedance stereo headphones

POWER AMPLIFIER SECTION

Continuous RMS Power Output: At 1 kHz
(less than 0.1% THD, both channels driven simultaneously)
60 + 6 J W (8 Ω)
50 + J W (4 Ω)

At 20 Hz - 20 kHz
50 + 50 W (8 Ω)
according to DIN 45500
55 + 55 W (8 Ω)

Dynamic Power Output: 160 W (8 Ω)
140 W (4 Ω)
(IHF constant power supply method)

Power Bandwidth (IHF): 5 - 40,000 Hz

0 dB = 0.775 V

- continued on page 2 -

THE QUALITY OF
THIS MANUAL IS
THE BEST THAT
IS AVAILABLE

SONY

SERVICE MANUAL

TA-5650

PREAMPLIFIER SECTION

Harmonic Distortion: Less than 0.05% at rated output
 IM Distortion: Less than 0.05% at rated output
 (60 Hz : 7 kHz = 4 : 1)
 Frequency Response: PHONO 1, 2 RIAA equalization ± 0.5 dB
 TUNER
 AUX 1, 2, 3 } 10 Hz -
 TAPE 1, 2 } 100 kHz ± 0 dB
 REC/PB (input) } (TONE: CANCEL)
 EXT ADPT 1, 2 } (input)

Tone Controls: BASS:
 ± 10 dB at 50 Hz (TURNOVER 250 Hz)
 ± 10 dB at 100 Hz (TURNOVER 500 Hz)
 TREBLE:
 ± 10 dB at 10 kHz (TURNOVER 2.5 kHz)
 ± 10 dB at 20 kHz (TURNOVER 5 kHz)

Filters: LOW:
 12 dB/octave attenuation below 30 Hz
 HIGH:
 12 dB/octave attenuation above 9 kHz

Loudness switch: + 10 dB at 50 Hz
 (att. 30 dB) + 3 dB at 10 kHz

Inputs:

	Sensitivity	Impedance	Maximum input capability*	S/N (weighting network)
PHONO 1, 2	2.5 mV	50 k ohms	300 mV	greater than 70 dB (B)
AUX 1, 2, 3 TAPE 1, 2 REC/PB (input) EXT ADPT 1, 2 (input)	150 mV	250 k ohms	—	greater than 90 dB (A)


* The maximum input capability is measured at a 0.05% harmonic distortion.

Outputs:


	Output voltage	Impedance
REC OUT 1, 2	150 mV	4.7 k ohms
PRE OUTPUT	1 V	1 k ohm
REC/PB	17 mV	82 k ohms
EXT ADPT 1, 2	150 mV	4.7 k ohms

Specification Labels:


US Model

	INTEGRATED STEREO AMPLIFIER MODEL NO. TA-5650 AC 120V 60Hz 160W SERIAL NO. _____ MADE IN JAPAN
---	---

Canadian Model

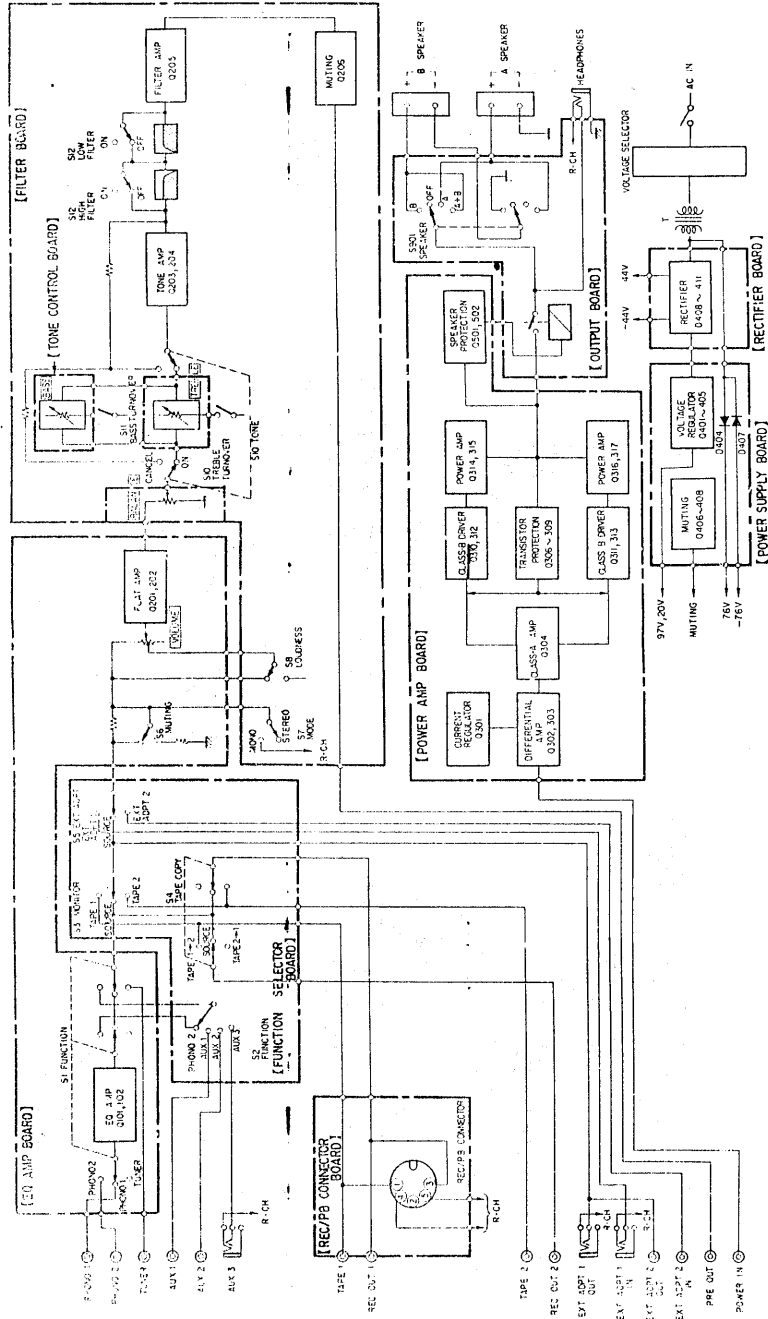
	INTEGRATED STEREO AMPLIFIER MODEL NO. TA-5650 AC 120V 60Hz 320VA SERIAL NO. _____ MADE IN JAPAN
---	--

UK and AEP Models

	INTEGRATED STEREO AMPLIFIER MODEL NO. TA-5650 AC 110, 127, 220, 240V ~ 50/60Hz 440W SERIAL NO. _____ MADE IN JAPAN
---	---

Note: * UK Model: Serial No. 600,001 and later
 AEP Model: Serial No. 500,001 and later

SECTION 1
BLOCK DIAGRAM



SECTION 2
ADJUSTMENT

Note: Turn the power switch on and allow sufficient time for filament warm-up.

20. **20V POWER VOLTAGE ADJUSTMENT**
With an output signal, adjust RT401 so that the output voltage of Q401 has a rms 20 V.

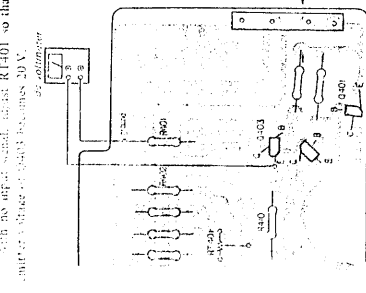


Fig. 2-1. 20V power voltage adjustment

21. **97V POWER VOLTAGE CONFIRMATION**
After 20V power voltage adjustment, confirm that the emitter voltage of Q401 shows 97 V ± 3 V.

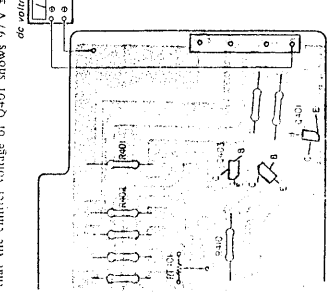


Fig. 2-2. 97V power voltage confirmation

23. **CONFIRMATION OF DC BALANCE VOLTAGE**

1. Set the SPEAKER switch to "A" position.
2. Connect the dc voltmeter across the SPEAKER OUT "A".
3. Confirm that the dc voltage at SPEAKER OUT "A" shows 0V ± 50mV.

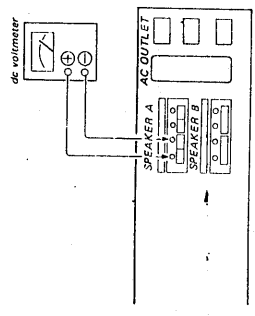


Fig. 2-3. Confirmation of dc balance voltage

24. **DC BIAS ADJUSTMENT**

Adjust RT301 and RT351 for 90 mV reading on the meter with no input signal.

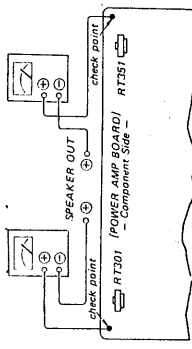


Fig. 2-4. DC bias adjustment

2.5. CHASSIS LAYOUT

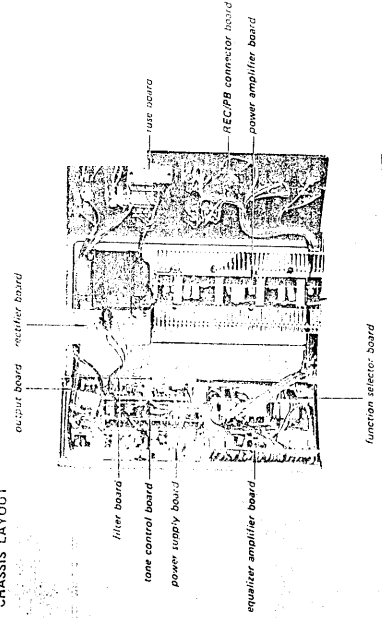
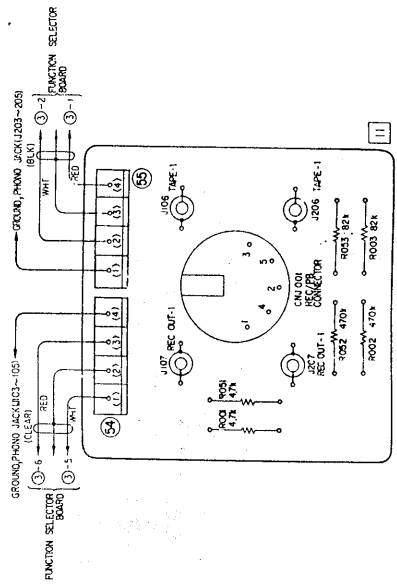


Fig. 2-5. Chassis layout

SECTION 3
MOUNTING AND SCHEMATIC DIAGRAMS

3-1. MOUNTING DIAGRAM - REC/PB CONNECTOR BOARD -

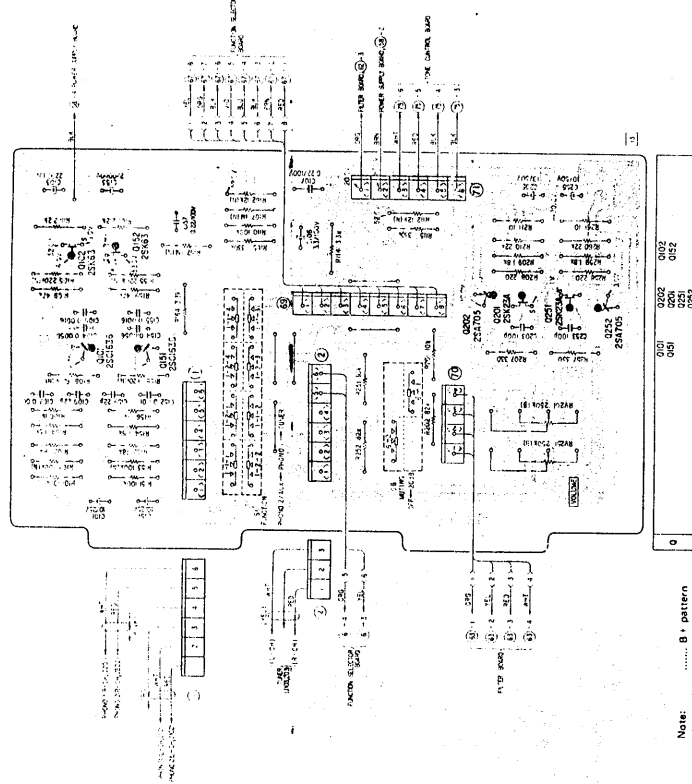
- Conductor Side -



TA-5650 TA-5650

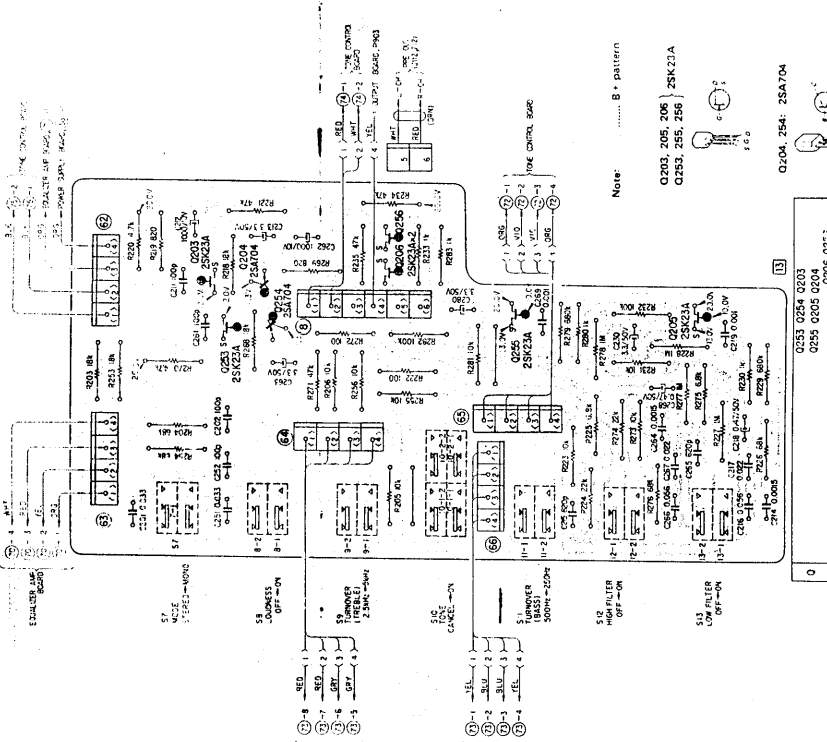
3-4. MOUNTING DIAGRAM - EQUALIZER AMPLIFIER BOARD - Conductor Side -

UK Model: Un to serial No. 800,250
AEP Model: Un to serial No. 801,900



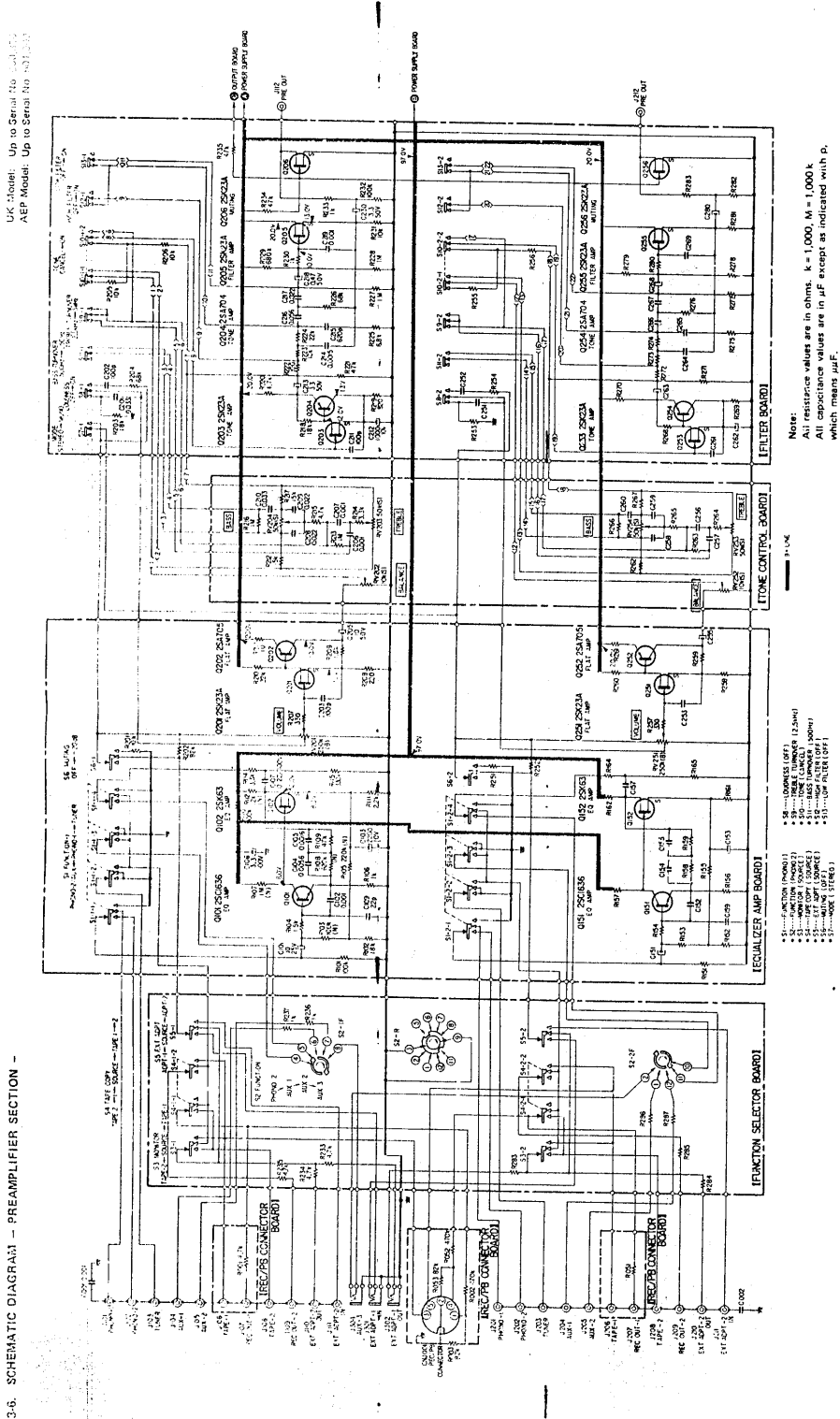
3-5. MOUNTING DIAGRAM - FILTER BOARD - Conductor Side -

UK Model: Un to serial No. 800,250
AEP Model: Un to serial No. 801,900



11100000

3-6. SCHEMATIC DIAGRAM - PREAMPLIFIER SECTION -



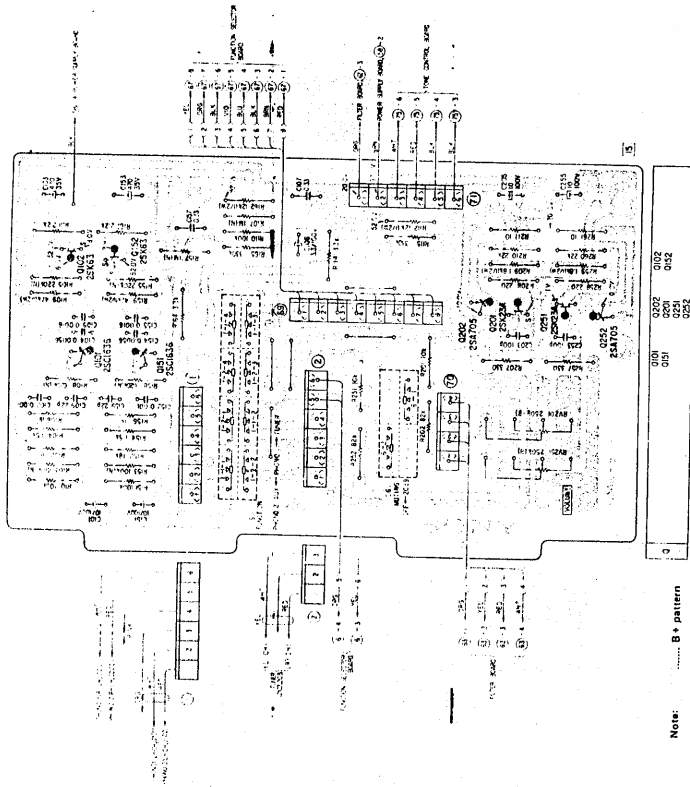
Note:
 All resistance values are in ohms. k = 1,000, M = 1,000 k
 All capacitance values are in μF except as indicated with p.
 which means pF.
 All components are measured with a VOM which has an
 input impedance of 20k ohms/V.
 Voltage variations may be noted due to normal production
 tolerances.

- * 2N3638 - DIODE (DET)
- * 2N3639 - DIODE (DET)
- * 2N3640 - DIODE (DET)
- * 2N3641 - DIODE (DET)
- * 2N3642 - DIODE (DET)
- * 2N3643 - DIODE (DET)
- * 2N3644 - DIODE (DET)
- * 2N3645 - DIODE (DET)
- * 2N3646 - DIODE (DET)
- * 2N3647 - DIODE (DET)
- * 2N3648 - DIODE (DET)
- * 2N3649 - DIODE (DET)
- * 2N3650 - DIODE (DET)
- * 2N3651 - DIODE (DET)
- * 2N3652 - DIODE (DET)
- * 2N3653 - DIODE (DET)
- * 2N3654 - DIODE (DET)
- * 2N3655 - DIODE (DET)
- * 2N3656 - DIODE (DET)
- * 2N3657 - DIODE (DET)
- * 2N3658 - DIODE (DET)
- * 2N3659 - DIODE (DET)
- * 2N3660 - DIODE (DET)
- * 2N3661 - DIODE (DET)
- * 2N3662 - DIODE (DET)
- * 2N3663 - DIODE (DET)
- * 2N3664 - DIODE (DET)
- * 2N3665 - DIODE (DET)
- * 2N3666 - DIODE (DET)
- * 2N3667 - DIODE (DET)
- * 2N3668 - DIODE (DET)
- * 2N3669 - DIODE (DET)
- * 2N3670 - DIODE (DET)
- * 2N3671 - DIODE (DET)
- * 2N3672 - DIODE (DET)
- * 2N3673 - DIODE (DET)
- * 2N3674 - DIODE (DET)
- * 2N3675 - DIODE (DET)
- * 2N3676 - DIODE (DET)
- * 2N3677 - DIODE (DET)
- * 2N3678 - DIODE (DET)
- * 2N3679 - DIODE (DET)
- * 2N3680 - DIODE (DET)
- * 2N3681 - DIODE (DET)
- * 2N3682 - DIODE (DET)
- * 2N3683 - DIODE (DET)
- * 2N3684 - DIODE (DET)
- * 2N3685 - DIODE (DET)
- * 2N3686 - DIODE (DET)
- * 2N3687 - DIODE (DET)
- * 2N3688 - DIODE (DET)
- * 2N3689 - DIODE (DET)
- * 2N3690 - DIODE (DET)
- * 2N3691 - DIODE (DET)
- * 2N3692 - DIODE (DET)
- * 2N3693 - DIODE (DET)
- * 2N3694 - DIODE (DET)
- * 2N3695 - DIODE (DET)
- * 2N3696 - DIODE (DET)
- * 2N3697 - DIODE (DET)
- * 2N3698 - DIODE (DET)
- * 2N3699 - DIODE (DET)
- * 2N3700 - DIODE (DET)

TA-5650 TA-5650

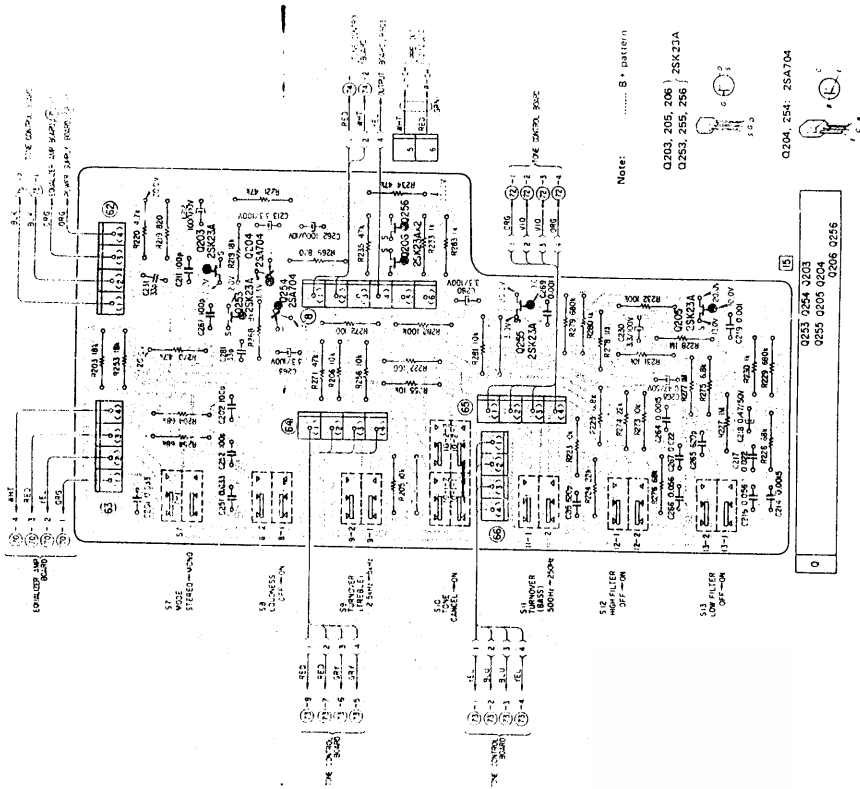
3-7. MOUNTING DIAGRAM - EQUALIZER AMPLIFIER BOARD -
- Conductor Side -

US Model: Serial No. 500,001 and later
Canadian Model: Serial No. 500,351 and later
UK Model: Serial No. 500,351 and later
AEP Model: Serial No. 501,001 and later



3-8. MOUNTING DIAGRAM - FILTER BOARD -
- Conductor Side -

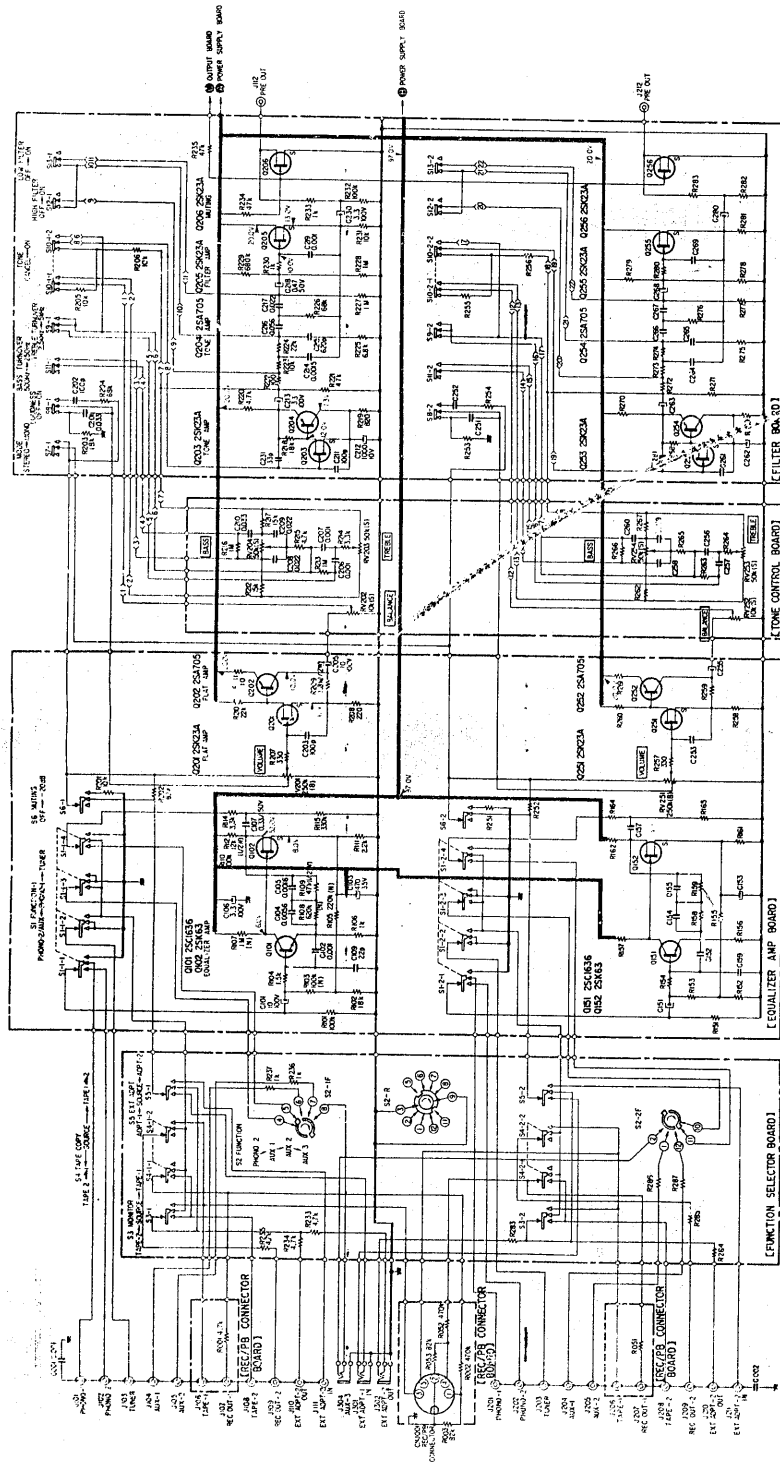
US Model: Serial No. 500,001 and later
Canadian Model: Serial No. 500,351 and later
UK Model: Serial No. 500,351 and later
AEP Model: Serial No. 501,001 and later



1A-5030 1A-5030

US Model: Serial No. 800,001 and later
 Canadian Model: Serial No. 700,001 and later
 UK Model: Serial No. 600,351 and later
 AEP Model: Serial No. 501,001 and later

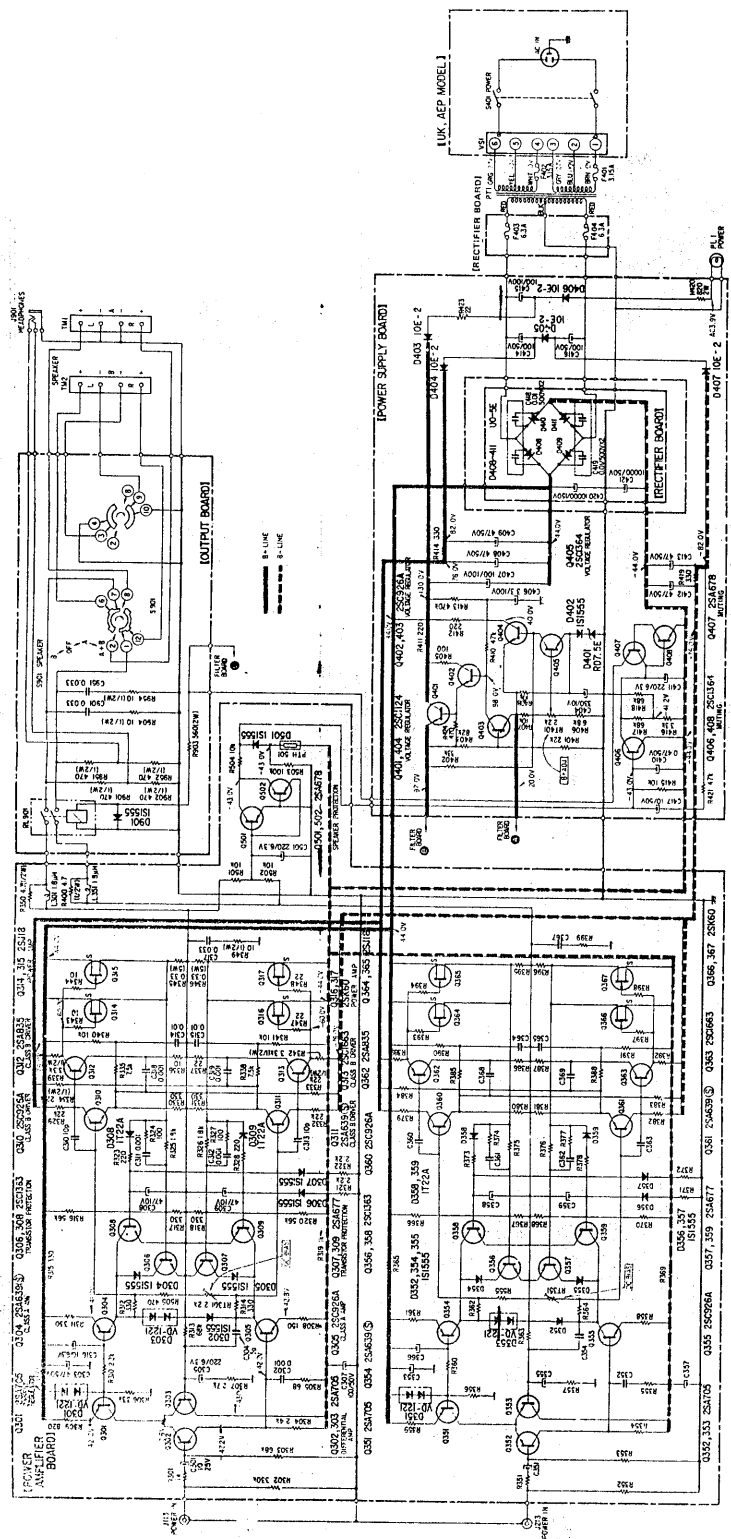
3-9. SCHEMATIC DIAGRAM - PREAMPLIFIER SECTION -



Note:
 All resistance values are in ohms, k = 1,000, M = 1,000 k
 All capacitance values are in μF except as indicated with p,
 which means pF.
 All values are measured with a VOM which has an input
 impedance of 20k ohms/ohm. No special in-
 Voltage variations may be noted &c. to normal production
 tolerances.

TA-5650 TA-5650

3-10. SCHEMATIC DIAGRAM - POWER AMPLIFIER SECTION -

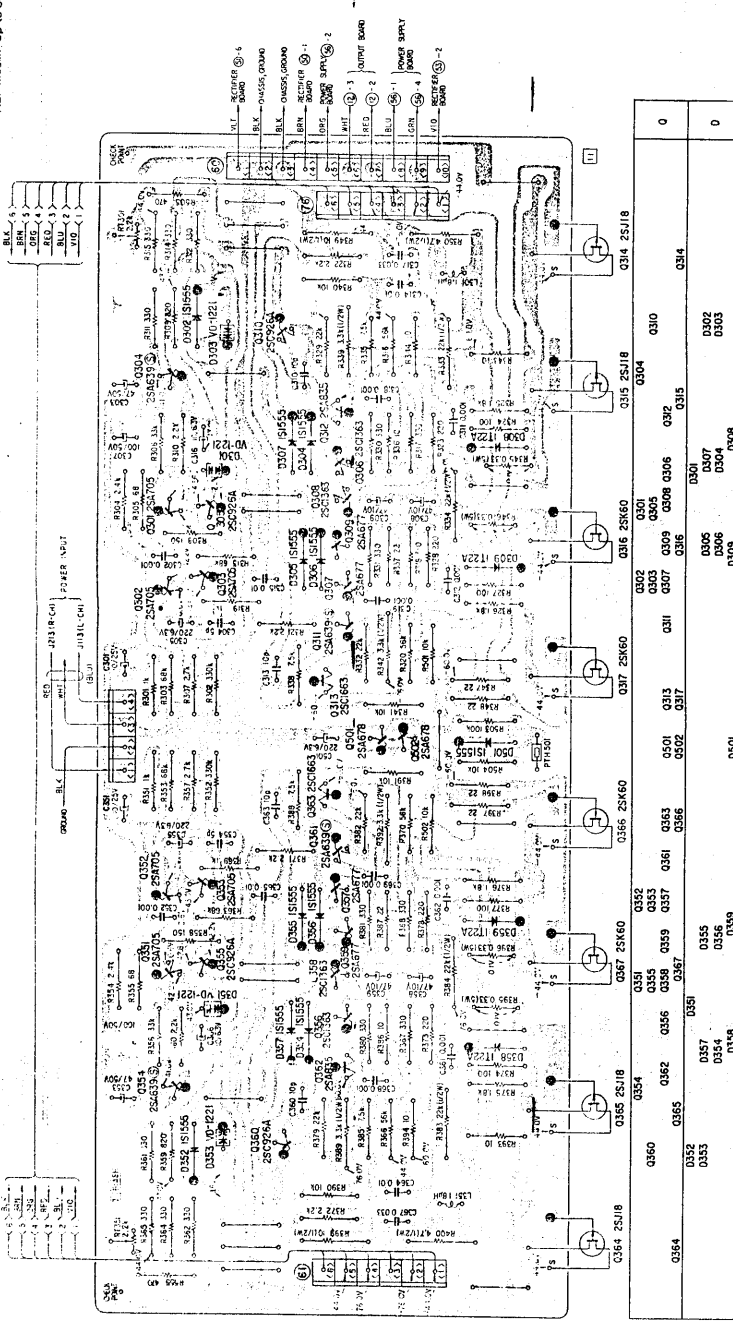


Note:
 All resistance values are in ohms. k = 1,000, M = 1,000,000.
 All capacitance values are in μ F except as indicated with p, which means pF.
 All voltages are dc measured with a VOM which has an input impedance of 20 k ohms/volt. No signal in.
 Voltage variations may be noted due to normal production tolerances.

3.11. MOUNTING DIAGRAM - POWER AMPLIFIER BOARD -

- Conductor Side -

UK Model: Up to Serial No. 600,350
AEP Model: Up to Serial No. 501,500



Note: B + pattern
..... B - pattern

- D308, 309 } 1T22A
- D368, 369
- D302, 352
- D364 - 307
- D354 - 357
- D361

- D301, 303
- D351, 353
- VO-1221

- 0316, 317
- 2SK60
- 0386, 387

- 0314, 315
- 0384, 385
- 2SK60

- 0312, 362
- 2SA635

- 0306, 308
- 0356, 358
- 2SC1963

- 0305, 310
- 2SC226A
- 0355, 360

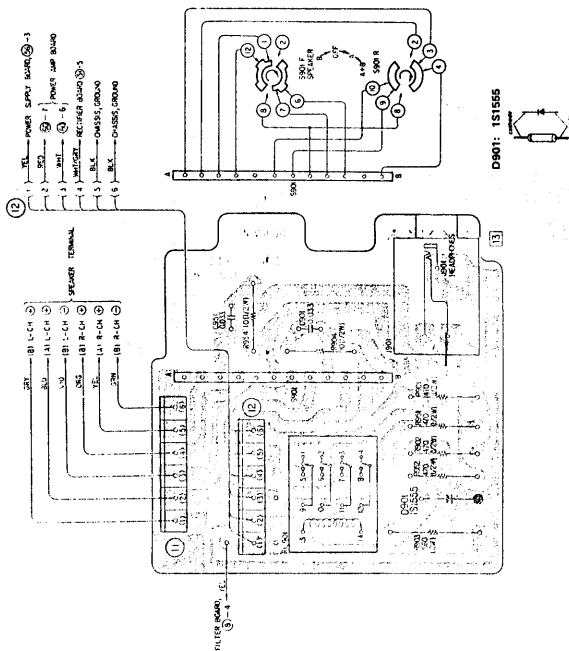
- 0304, 311
- 2SA639
- 0354, 361

- 0301 - 303
- 2SA705
- 0351 - 353

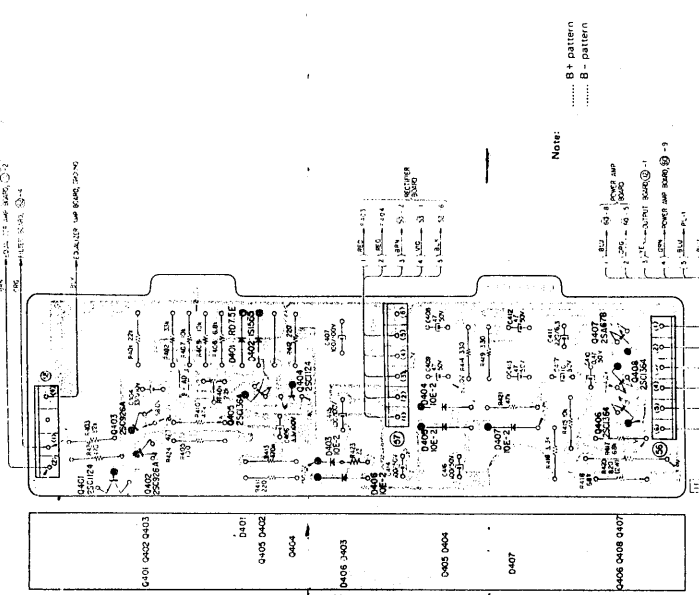
- 0307, 309
- 2SA677
- 0357, 359
- 2SA678
- 0301, 302
- 2SC1963

TA-5650 TA-5650

3-12. MOUNTING DIAGRAM - OUTPUT BOARD -
 UK Model: Up to Serial No. 600,350
 AEP Model: Up to Serial No. 501,900
 - Conductor Side -



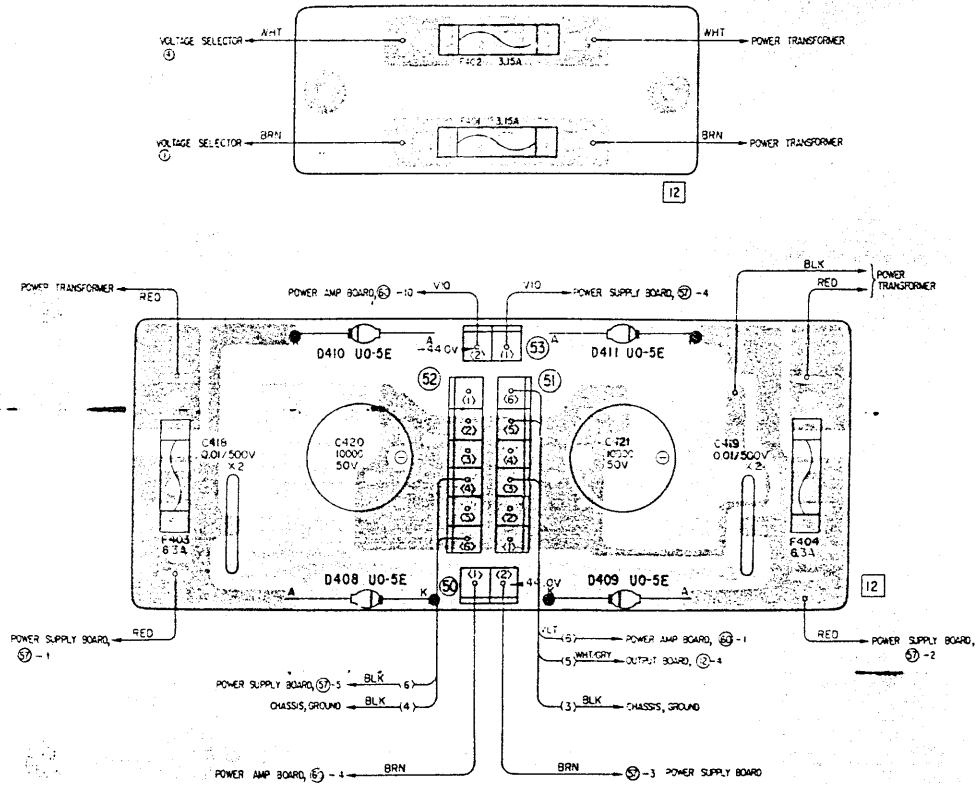
3-13. MOUNTING DIAGRAM - POWER SUPPLY BOARD -
 UK Model: Up to Serial No. 600,350
 AEP Model: Up to Serial No. 501,900
 - Conductor Side -



Note:
 B + pattern
 B - pattern

- Q401: RD75E
- Q402: 1S1555
- Q403: 4037, 10E-2
- Q404: 25C1124
- Q405: 405
- Q406: 25C326A
- Q407: 25A678
- Q408: 25C1354
- Q409: RD75E
- Q410: 1S1555
- Q411: 4037, 10E-2

3-14. MOUNTING DIAGRAM — RECTIFIER/FUSE BOARDS —
 — Component Side —



D408, 409 } UO-5E
 D410, 411 }

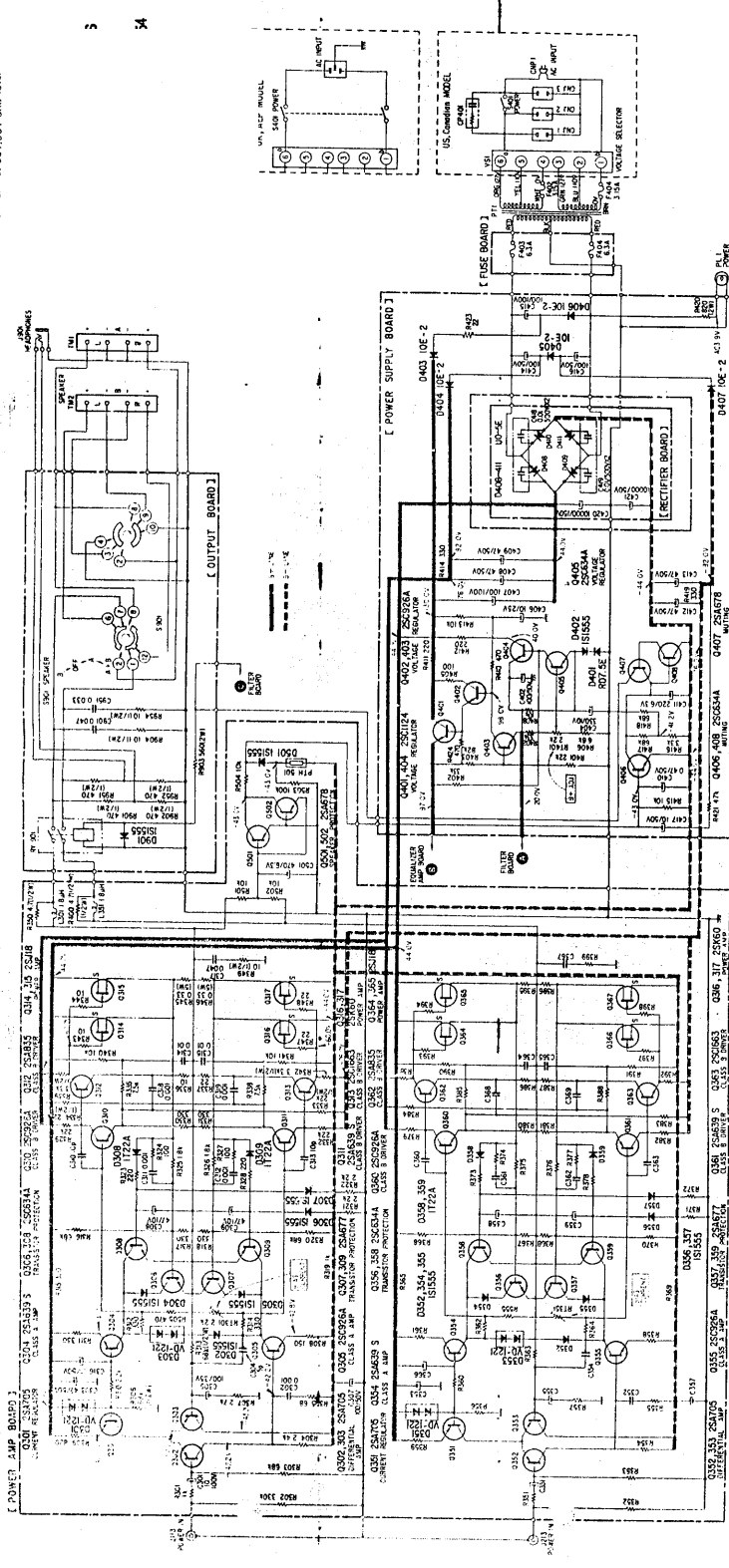


Note:
 B + pattern
 B - pattern

TA-5650 TA-5650

US Model: Serial No. 800,001 and later
 Canadian Model: Serial No. 700,001 and later
 UK Model: Serial No. 600,351 and later
 AEP Model: Serial No. 501,901 and later

3.15. SCHEMATIC DIAGRAM - POWER AMPLIFIER SECTION -

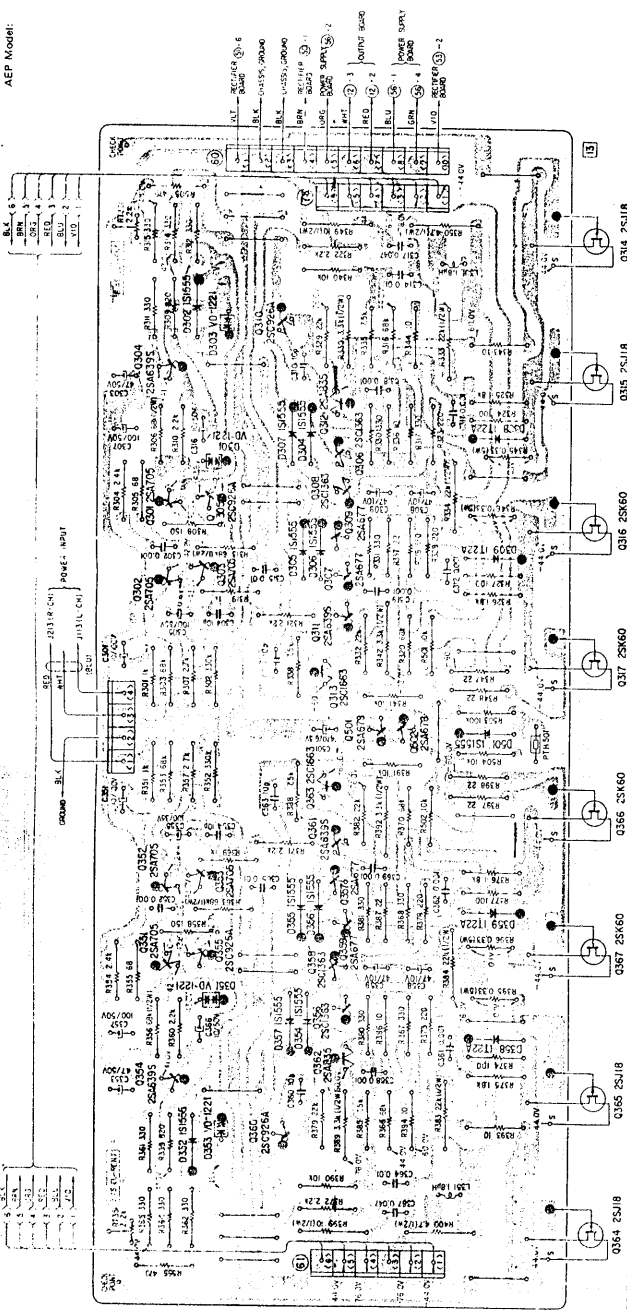


Note:
 All resistance values are in ohms. k = 1,000, M = 1,000 k
 All capacitance values are in μF except as indicated with p,
 which means μpF .
 All voltages are dc measured with a VOM which has an input
 impedance of 20k ohm/volt. No signal in.
 Voltage variations may be noted due to normal production
 tolerance.

TA-5650 1A-5650

3-16. MOUNTING DIAGRAM - POWER AMPLIFIER BOARD -
- Conductor Side -

US Model: Serial No. 800,001 and later
Canadian Model: Serial No. 700,001 and later
UK Model: Serial No. 600,351 and later
AEP Model: Serial No. 501,901 and later



Q364 2S118	Q365 2S118	Q366 2S118	Q367 2S118	Q368 2S118	Q369 2S118	Q370 2S118	Q371 2S118	Q372 2S118	Q373 2S118	Q374 2S118	Q375 2S118	Q376 2S118	Q377 2S118	Q378 2S118	Q379 2S118	Q380 2S118	Q381 2S118	Q382 2S118	Q383 2S118	Q384 2S118	Q385 2S118	Q386 2S118	Q387 2S118	Q388 2S118	Q389 2S118	Q390 2S118	Q391 2S118	Q392 2S118	Q393 2S118	Q394 2S118	Q395 2S118	Q396 2S118	Q397 2S118	Q398 2S118	Q399 2S118	Q400 2S118	Q401 2S118	Q402 2S118	Q403 2S118	Q404 2S118	Q405 2S118	Q406 2S118	Q407 2S118	Q408 2S118	Q409 2S118	Q410 2S118	Q411 2S118	Q412 2S118	Q413 2S118	Q414 2S118	Q415 2S118	Q416 2S118	Q417 2S118	Q418 2S118	Q419 2S118	Q420 2S118	Q421 2S118	Q422 2S118	Q423 2S118	Q424 2S118	Q425 2S118	Q426 2S118	Q427 2S118	Q428 2S118	Q429 2S118	Q430 2S118	Q431 2S118	Q432 2S118	Q433 2S118	Q434 2S118	Q435 2S118	Q436 2S118	Q437 2S118	Q438 2S118	Q439 2S118	Q440 2S118	Q441 2S118	Q442 2S118	Q443 2S118	Q444 2S118	Q445 2S118	Q446 2S118	Q447 2S118	Q448 2S118	Q449 2S118	Q450 2S118	Q451 2S118	Q452 2S118	Q453 2S118	Q454 2S118	Q455 2S118	Q456 2S118	Q457 2S118	Q458 2S118	Q459 2S118	Q460 2S118	Q461 2S118	Q462 2S118	Q463 2S118	Q464 2S118	Q465 2S118	Q466 2S118	Q467 2S118	Q468 2S118	Q469 2S118	Q470 2S118	Q471 2S118	Q472 2S118	Q473 2S118	Q474 2S118	Q475 2S118	Q476 2S118	Q477 2S118	Q478 2S118	Q479 2S118	Q480 2S118	Q481 2S118	Q482 2S118	Q483 2S118	Q484 2S118	Q485 2S118	Q486 2S118	Q487 2S118	Q488 2S118	Q489 2S118	Q490 2S118	Q491 2S118	Q492 2S118	Q493 2S118	Q494 2S118	Q495 2S118	Q496 2S118	Q497 2S118	Q498 2S118	Q499 2S118	Q500 2S118
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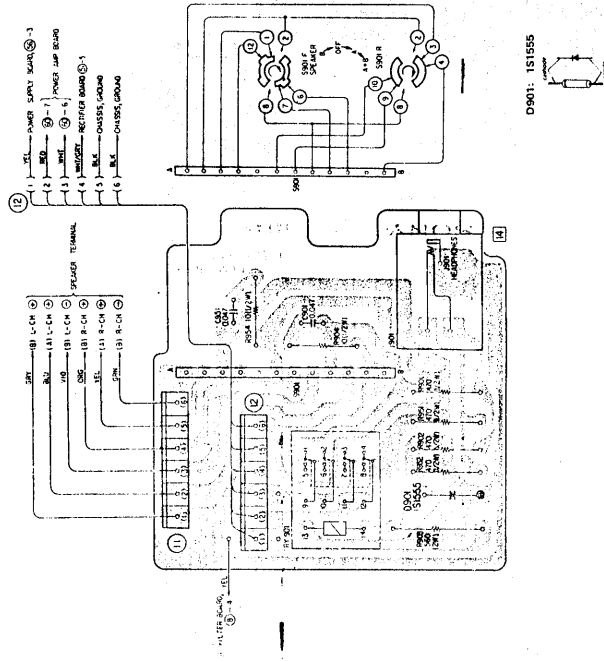
Note:
..... B + pattern
..... B - pattern

- Q301, 303 } 2SA705
- Q302, 309 } 2SA705
- Q303, 359 } 2SA705
- Q304, 311 } 2SA677
- Q305, 361 } 2SA677
- Q306, 362 } 2SA677
- Q307, 359 } 2SA677
- Q308, 309 } 1T22A
- Q309, 359 } 1T22A
- Q310, 353 } 1S1555
- Q311, 353 } 1S1555
- Q312, 362 } 2SA678
- Q313, 363 } 2SA678
- Q314, 315 } 2SA678
- Q315, 363 } 2SA678
- Q316, 317 } 2SA678
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- Q326, 317 } 2SA678
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TA-5650 TA-5650

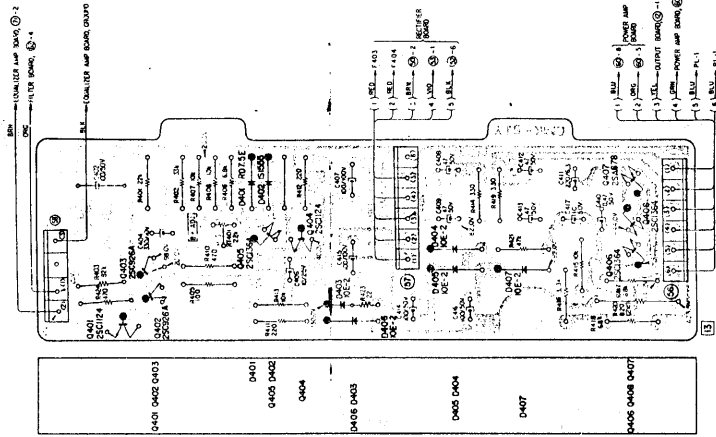
3-17. MOUNTING DIAGRAM - OUTPUT BOARD -
- Conductor Side -

US Model: Serial No. 800,001 and later
Canadian Model: Serial No. 700,001 and later
UK Model: Serial No. 600,351 and later
AEP Model: Serial No. 501,901 and later



3-18. MOUNTING DIAGRAM - POWER SUPPLY BOARD -
- Conductor Side -

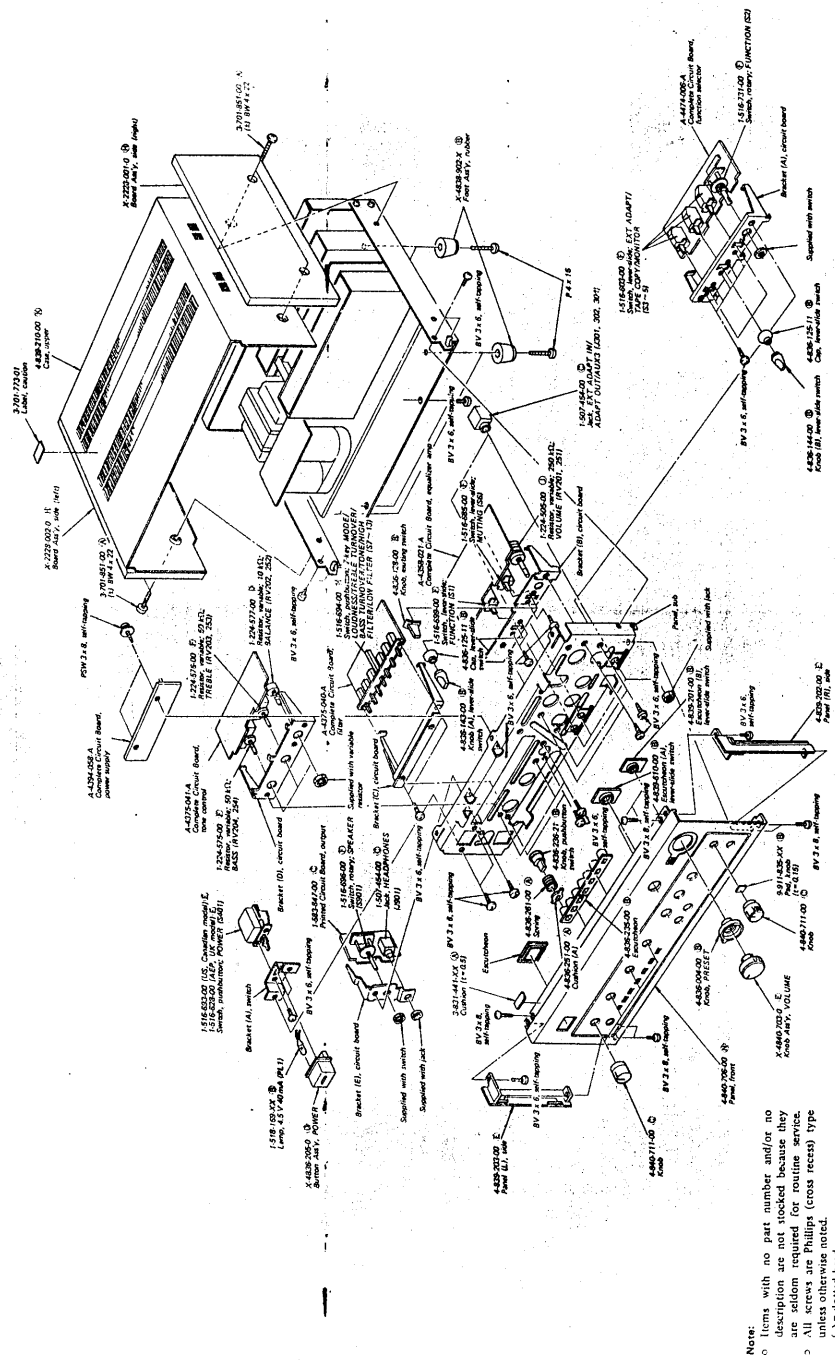
US Model: Serial No. 800,001 and later
Canadian Model: Serial No. 700,001 and later
UK Model: Serial No. 600,351 and later
AEP Model: Serial No. 501,901 and later



- D901: 1S1555
- D401: RD-7-5E
- D402: 1S1555
- D403: 407: 10E-2
- D404: 25C1124
- D405: 408: 25C926A
- D406: 408: 25C1384
- D407: 25A678

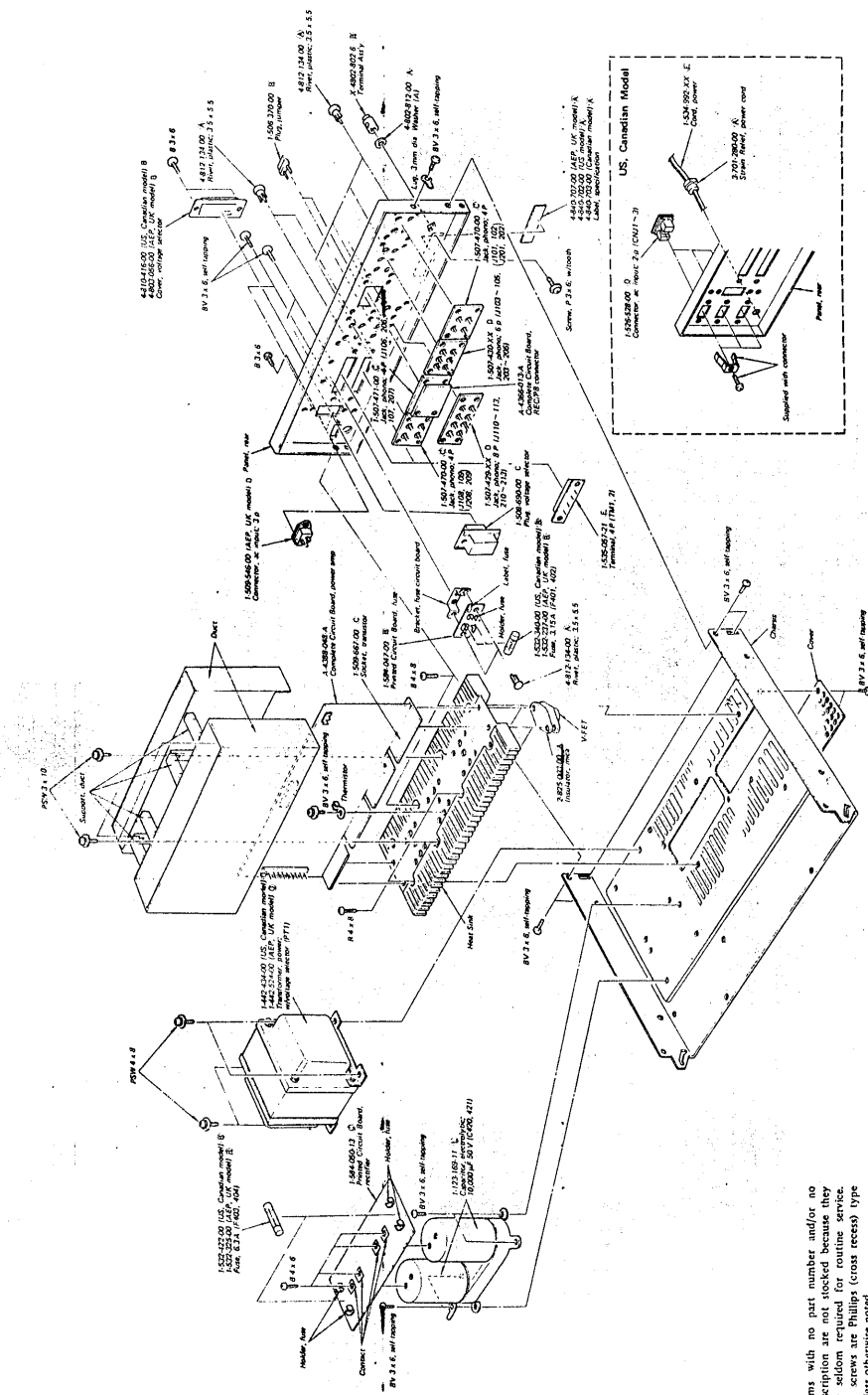
TA-5550 TA-5550

SECTION 4
EXPLODED VIEWS



Note:
 ① Items with no part number and/or no description are not stocked because they are seldom required for routine service.
 ② All screws are Phillips (cross recess) type unless otherwise noted.
 ③ = slotted head
 The enclosed letters (Ⓜ, Ⓟ, Ⓠ) are applicable for European model only.

TA-5650 TA-5650



Note:
 o Items with no part number and/or no description are not stocked because they are seldom required for routine service.
 o All screws are Phillips (cross recess) type unless otherwise noted.
 o (-) = slotted head.
 o The circled letters (Ⓢ to Ⓠ) are applicable for European model only.

SECTION 5
ELECTRICAL PARTS LIST

TA-5650 TA-5650

Note: The circled letters (A, to Z) are applicable for European model only.

Mark	USA model	Applicable Serial No.
(A)	USA model	Serial No. 800,001 and later
(B)	UK model	Serial No. 800,001 and later
(C)	AFP model	Serial No. 800,001 and later

Mark	USA model	Applicable Serial No.
(A)	USA model	Serial No. 501,501 and later
(B)	UK model	Serial No. 501,501 and later
(C)	AFP model	Serial No. 501,501 and later

Ref. No.	Part No.	Description																									
Q314.364	Q315.365	Q316.366	Q317.367	Q401	Q402.403	Q404	Q405.406	Q407	Q408	Q501.502	D301.501	D302.502	D303.503	D304-307	D354-357	D308.358	D309.359	D401	D402	D403-407	D408-411	D501.901	PTH501	L301.1351	FT1	FT1	

Ref. No.	Part No.	Description
COMPLETE CIRCUIT BOARDS		
A-4358-021-A		Equalizer Amp
A-4356-011-A		REC/PB Connector
A-4375-040-A		Filter
A-4375-041-A		TO-2 Control
A-4388-031-A		Power Amp
A-4394-051-A		Power Supply
A-4474-006-A		Function Selector
PRINTED CIRCUIT BOARDS		
I-583-947-00		Output
I-584-947-00		Rectifier
I-584-050-13		Rectifier
SEMICONDUCTORS		
Transistors		
Q101.151		2SC1636
Q102.152		2SK63
Q201.251		2SK23A
Q202.252		2SA705
Q301.351		2SK23A
Q304.354		2SA705
Q305.355		2SK23A
Q306.356		2SK23A
Q307.357		2SA705
Q308.358		2SK23A
Q309.359		2SA639S
Q310.360		2SK1364
Q311.361		2SA677
Q312.362		2SK1364
Q313.363		2SA677
		2SC926A
		2SA639S
		2SA835
		2SC1663

Note: The circled letters (A, to Z) are applicable for European model only.

Ref. No.	Part No.	Description
C301.351		25V
C302.352		100V
C303.353		50V
C304.354		ceramic
C305.355		6.3V
C307.357		35V
C308.358		50V
C309.359		10V
C310.360		ceramic
C311.361		mylar
C312.362		0.001
C313.363		ceramic
C314.364		mylar
C315.365		0.01
C316.366		6.3V
C317.367		50V
C318.368		0.033
C319.369		0.047
C402		50V
C404		10V
C406		100V
C407		25V
C408.409		100V
C410		50V
C411		6.3V
C412.413		50V
C414		50V
C415		100V
C416		50V
C417		50V
C418.419		500V ceramic
C420.421		10000
C501		6.3V
C901.951		6.3V

All capacitors are in μF and electrolytic type unless otherwise indicated.
30 or less working volts are omitted except for electrolytic type. (p = μF)

CAPACITORS

Capacitors are in μF and electrolytic type unless otherwise indicated.
30 or less working volts are omitted except for electrolytic type. (p = μF)

TRANSFORMER

Power (USA, Canada model)
Power (AFP, UK model)

TA-5550

Note: The circled letters (A) to (Z) are applicable for European model only.

Note: The circled letters (A) to (Z) are applicable for European model only.

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
57-13	1-516-694-00	(H) Push, 7-key; MODE, LOUDNESS, TREBLE TURN-OVER, BASS TURN-OVER, TONE, HIGH FILTER, LOW FILTER	TM12	1-535-057-21 1-506-370-00 1-508-690-00 1-509-667-00 1-534-992-XX	Terminal, 4-p Plug, jumper Plug, voltage selector Socket, transistor Cord, power (USA, Canada model)
5401	1-516-623-00 1-516-693-00	(E) Pushbutton, POWER (AEP, UK model) (E) Pushbutton, POWER (USA, Canada model)			
5901	1-516-696-00	(E) Rotary, SPEAKER			
JACKS					
CN1001	1-509-549-00	(B) Connector, REC/PB			
CN11-3	1-526-528-00	(B) Connector, ac; 2-p (USA, Canada model)			
	1-509-546-00	(B) Connector, ac; 3-p (AEP, UK model)			
J101, 701	1-507-470-00	(C) Phono, 4-p; PHONO 1, 2			
J102, 202	1-507-470-00	(C) Phono, 4-p; PHONO 1, 2			
J103-105	1-507-439-XX	(B) Phono, 6-p; TUNER, AUX 1, 2			
J106, 306	1-507-471-00	(C) Phono, 4-p; TAPE 1, REC OUT 1			
J107, 307	1-507-471-00	(C) Phono, 4-p; TAPE 1, REC OUT 1			
J108, 308	1-507-470-00	(C) Phono, 4-p; TAPE 2, REC OUT 2			
J109, 209	1-507-470-00	(C) Phono, 4-p; TAPE 2, REC OUT 2			
J110-113	1-507-429-XX	(B) Phono, 8-p; EXT ADPT 2			
J210-213	1-507-429-XX	(B) Phono, 8-p; EXT ADPT 2			
J301, 302	1-507-454-00	(C) EXT ADAPT IN, ADAPT OUT, AUX 3			
J304	1-507-454-00	(C) EXT ADAPT IN, ADAPT OUT, AUX 3			
9901	1-507-454-00	(C) HEADPHONES			
MISCELLANEOUS					
CP401	1-231-057-31	(B) Encapsulated Component (USA, Canada model)			
F401, 402	1-532-340-00	(B) Fuse, 3.15A (USA, Canada model)			
	1-532-237-00	(B) Fuse, 3.15A (AEP, UK model)			
F403, 404	1-532-325-00	(B) Fuse, 6.3A (AEP, UK model)			
	1-532-422-00	(B) Fuse, 6.3A (USA, Canada model)			
PL1	1-518-169-XX	(B) Lamp, 4.5V 40mA			
RY901	1-515-257-00	(H) Relay			
R102, 159	1-244-913-11	(A) 47k 1/4W carbon			
R112, 162	1-244-899-11	(A) 12k 1/4W carbon			
R209, 259	1-244-879-11	(A) 1.8k 1/4W carbon			
R316, 356	1-244-917-11	(A) 68k 1/4W carbon			
R313, 363	1-244-917-11	(A) 68k 1/4W carbon			
R317, 357	1-244-905-11	(A) 22k 1/4W carbon			
R320, 380	1-211-650-11	(A) 3.3k 1/4W carbon			
R322, 392	1-211-650-11	(A) 3.3k 1/4W carbon			
R345, 395	1-217-157-11	(A) 0.33 5W wire-wound			
R346, 396	1-217-157-11	(A) 0.33 5W wire-wound			
R349, 399	1-211-590-11	(A) 10 1/4W carbon			
R350, 450	1-244-817-11	(A) 4.7 1/4W carbon			
R420	1-206-662-11	(A) 820 2W metal oxide			
R901, 951	1-244-865-11	(A) 470 1/4W carbon			
R902, 952	1-206-658-11	(A) 560 2W metal oxide			
R904, 905	1-211-590-11	(A) 10 1/4W carbon			
RT201, 351	1-224-489-00	(B) 2.2k adjustable			
RT401	1-224-250-XX	(C) 2.2k adjustable			
Rv201, 251	1-224-505-00	(D) 250k variable; VOLUME			
Rv202, 252	1-224-577-00	(D) 10k variable; BALANCE			
Rv203, 253	1-224-576-00	(D) 50k variable; TREBLE			
Rv204, 254	1-224-575-00	(D) 50k variable; BASS			
SWITCHES					
S1	1-516-699-00	(E) Lever-side, FUNCTION			
S2	1-516-721-00	(E) Rotary, FUNCTION			
S3-S	1-516-603-00	(E) Lever-side, EXT ADAPT, TAPE COPY, MONITOR			
S6	1-516-685-00	(E) Lever-side, MUTING			

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- 38 -

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- 37 -