

Service Manual

ST-8044/K

FM/AM Stereo Tuner

ST-8044

(E), (EG), (X), (XA),
(XAL), (XGH)

ST-8044K

(E), (EG), (X), (XA),
(XAL), (XGH), (EB)

ST-8044



ST-8044K

- * The models ST-8044 (E, EG) and ST-8044K (E, EG) are available in Scandinavia and European only.
- * The models ST-8044 (X, XA) and ST-8044K (X, XA) are available in Asia, Latin America, Middle East and Africa only.
- * The models ST-8044 (XAL) and ST-8044K (XAL) are available in Australia only.
- * The models ST-8044 (XGH) and ST-8044K (XGH) are available in Holland only.
- * The model ST-8044K (EB) is available in Belgium only.

TECHNICAL SPECIFICATIONS

Specifications are subject to change without notice for further improvement.

[DIN 45 500]

FM TUNER SECTION

Frequency range		88 ~ 108 MHz
Antenna terminals		300Ω (balanced), 75Ω (unbalanced)
Sensitivity (±40 kHz deviation)		
S/N 30 dB		1.9μV (300Ω), 1.3μV (75Ω)
S/N 26 dB		1.7μV (300Ω), 1.2μV (75Ω)
S/N 20 dB		1.5μV (300Ω), 0.9μV (75Ω)
IHF usable sensitivity		1.9μV (IHF '58)
IHF S/N 46 dB stereo quieting sensitivity		25μV (75Ω)
Total harmonic distortion	MONO	0.15%
	STEREO	0.3%
S/N (±40 kHz deviation)	MONO	68 dB (IHF: 75 dB)
	STEREO	65 dB (IHF: 70 dB)
Frequency response		20 Hz ~ 15 kHz, +0.5 dB, -1.5 dB
Alternate channel selectivity		75 dB
Capture ratio		1.0 dB
Image rejection at 98 MHz		55 dB
IF rejection at 98 MHz		95 dB
Spurious response rejection at 98 MHz		50 dB
AM suppression		55 dB
Stereo separation	1 kHz	45 dB, 10 kHz 35 dB
Leak carrier	19 kHz	-35 dB (-40 dB, IHF)
	38 kHz	-48 dB (-40 dB, IHF)

Limiting point		1.2μV
Bandwidth	IF amplifier	160 kHz
	FM demodulator	1000 kHz
Channel balance (250 Hz ~ 6300 Hz)		±1.5 dB

AM TUNER SECTION

Frequency range		525 ~ 1605 kHz
Sensitivity (S/N 20 dB)		30μV, 250μV/m
Selectivity		30 dB
Image rejection at 1000 kHz		50 dB
IF rejection at 1000 kHz		40 dB

GENERAL

Output voltage		0.6V
Power consumption		16W
Power supply (50 Hz/60 Hz)		110V/120V/220V/240V
Dimensions (W x H x D)		430 x 142 x 254 mm (16 1/2" x 5 5/8" x 10")
Weight		4.2 kg (9.3 lb.)

TECHNISCHE DATEN Spezifikationen können infolge von Verbesserungen ohne Ankündigung geändert werden.

[DIN 45 500]
UKW-TUNERTEIL

<p>Frequenzgang 88 ~ 108 MHz Antennenanschluss 300Ω (symmetrisch), 75Ω (unsymmetrisch) Empfindlichkeit (±40 kHz Hub) 30 dB Rauschabstand 1,9μV (300Ω), 1,3μV (75Ω) 26 dB Rauschabstand 1,7μV (300Ω), 1,2μV (75Ω) 20 dB Rauschabstand 1,5μV (300Ω), 0,9μV (75Ω) Empfindlichkeit nach IHF 1,9μV (IHF '58) 46 dB Rauschabstand utilisable Empfindlichkeit nach IHF 25μV (75Ω), STEREO</p>	<p>Kanaltrennung 1kHz 45 dB, 10 kHz 35 dB Hilfsträgerdämpfung (Pilotton) 19 kHz -35 dB (-40 dB, IHF) 38 kHz -48 dB (-40 dB, IHF) Begrenzungseinsatz 1,2μV Bandbreite ZF-Verstärker 180 kHz Radiodetektor 1000 kHz Kanalabweichung (250 Hz ~ 6300 Hz) ± 1,5 dB</p>
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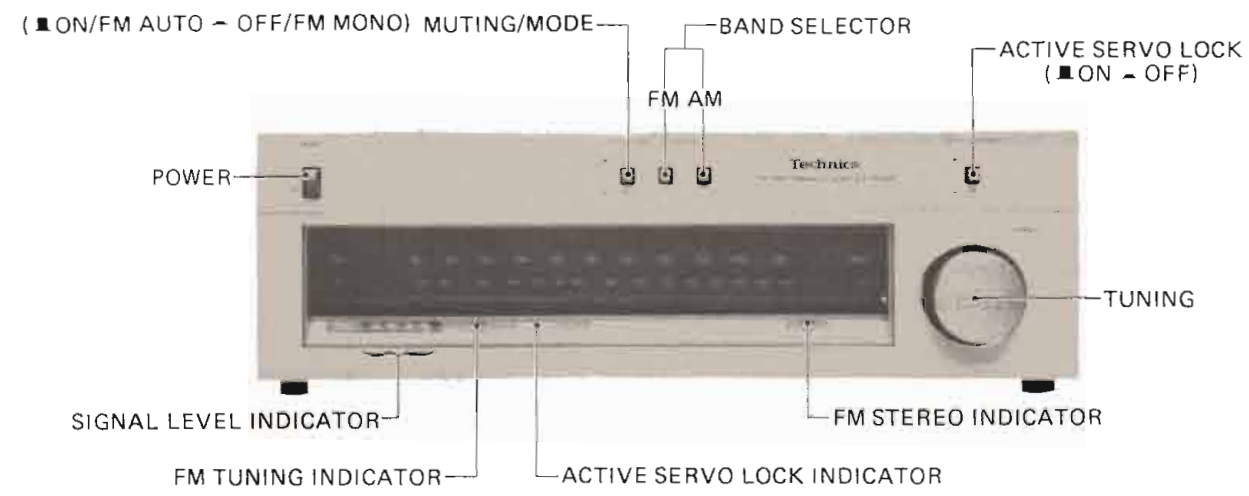
AM-TUNERTEIL

<p>Klirrfaktor MONO 0,15% STEREO 0,3% Rauschabstand (±40 kHz Hub) MONO 68 dB (IHF: 75 dB) STEREO 65 dB (IHF: 70 dB) Frequenzgang 20 Hz ~ 15 kHz, +0,5 dB, -1,5 dB Selektivität 75 dB Gleichwellen-Selektion 1,0 dB Spiegelfrequenzunterdrückung bei 98 MHz 55 dB ZF-Festigkeit bei 98 MHz 85 dB Unselektivität-Dämpfung bei 98 MHz 80 dB AM-Unterdrückung 55 dB</p>	<p>Frequenzgang 525 ~ 1605 kHz Empfindlichkeit (20 dB Rauschabstand) 30μV, 250μV/m Selektivität 30 dB Spiegelfrequenz-Selektion bei 1000 kHz 50 dB ZF-Festigkeit bei 1000 kHz 40 dB</p>
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ALLGEMEINE DATEN

<p>Ausgangsspannung 0,6V Leistungsaufnahme 16W Netzspannung (50 Hz/60 Hz) 110V/120V/220V/240V Abmessungen (B x H x T) 430 x 142 x 254 mm Gewicht 4,2 kg</p>

■ LOCATION OF CONTROLS



CARACTERISTIQUES TECHNIQUES Sujet à changement sans préavis.

[DIN 45 500]
PARTIE TUNER FM

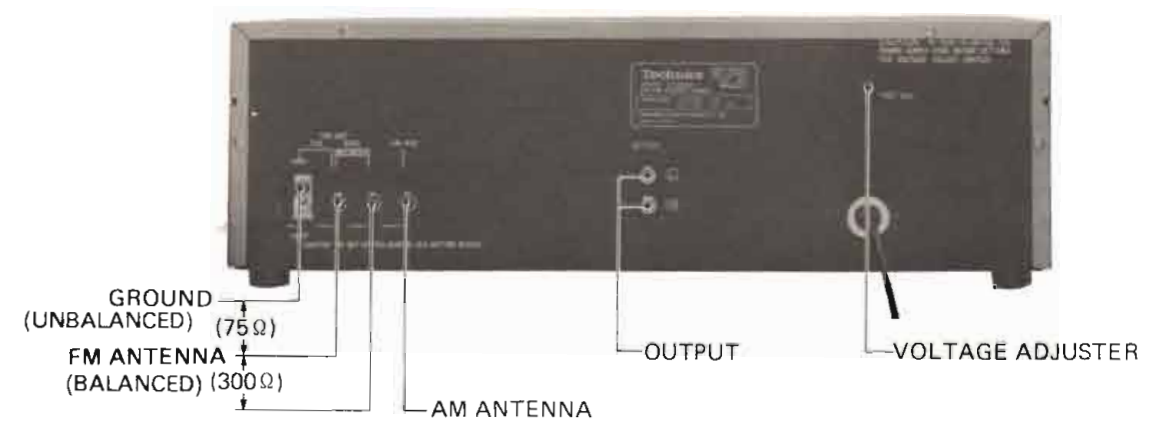
<p>Gamme reçue 88 ~ 108 MHz Impédance d'antenne 300Ω (symétrique) 75Ω (asymétrique) Sensibilité (±40 kHz déviation) Signal/bruit 30 dB 1,9μV (300Ω), 1,3μV (75Ω) Signal/bruit 26 dB 1,7μV (300Ω), 1,2μV (75Ω) Signal/bruit 20 dB 1,5μV (300Ω), 0,9μV (75Ω) IHF Sensibilité 1,9μV (IHF '58) IHF Sensibilité pour S/B 46 dB 25μV (75Ω), STEREO</p>	<p>Séparation stéréophonique 1 kHz 45 dB, 10 kHz 35 dB Courant porteur de dispersion 19 kHz -35 dB (-40 dB, IHF) 38 kHz -48 dB (-40 dB, IHF) Point limite 1,2μV Largeur de bande Amplificateur FI 180 kHz Démodulateur FM 1000 kHz Equilibrage de canaux (250 Hz ~ 6300 Hz) ± 1,5 dB</p>
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PARTIE TUNER AM

<p>Distorsion harmonique total MONO 0,15% STEREO 0,3% Signal/bruit (±40 kHz déviation) MONO 68 dB (IHF: 75 dB) STEREO 65 dB (IHF: 70 dB) Réponse de fréquence 20 Hz ~ 15 kHz, +0,5 dB, -1,5 dB Sélectivité en canaux alternés 75 dB Taux de capture 1,0 dB Réjection de fréquence image à 98 MHz 55 dB Réjection FI à 98 MHz 85 dB Réjection de réception non sélective à 98 MHz 80 dB Suppression AM 55 dB</p>	<p>Gamme reçue 525 ~ 1605 kHz Sensibilité (Rapport S/B 20 dB) 30μV, 250μV/m Sélectivité 30 dB Réjection de fréquence image à 1000 kHz 50 dB Réjection FI à 1000 kHz 40 dB</p>
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GENERALITES

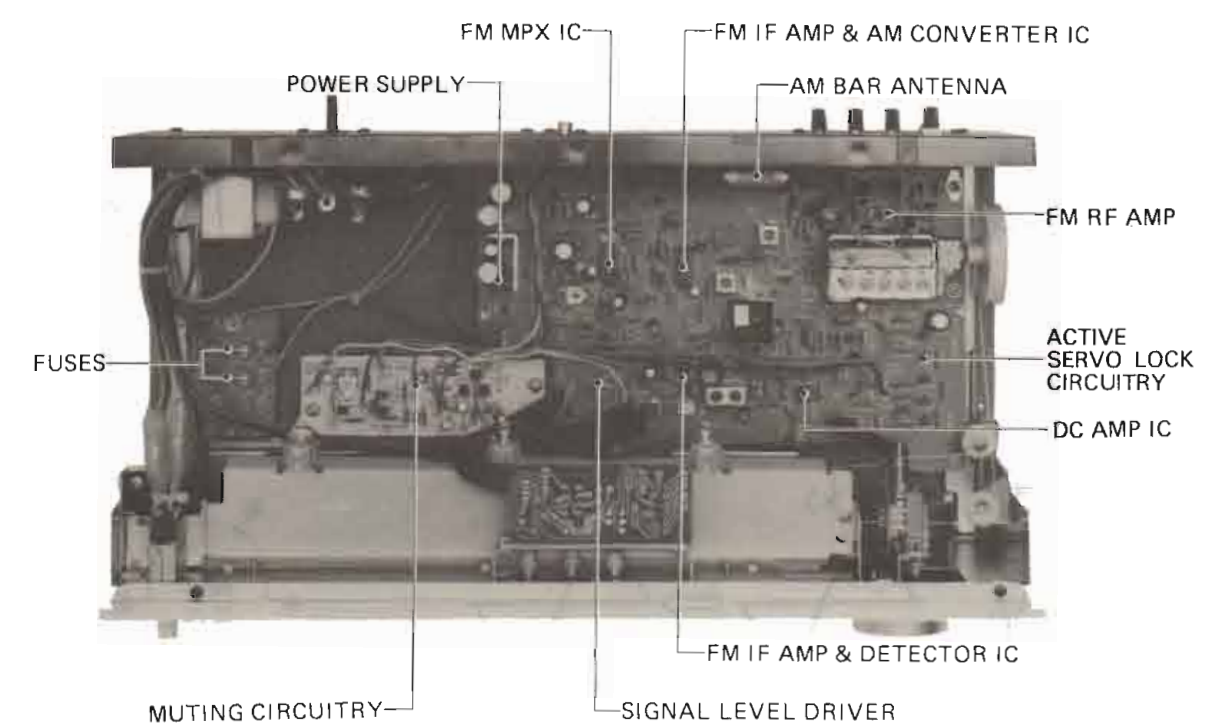
<p>Tension de sortie 0,6V Consommation 16W Alimentation (50 Hz/60 Hz) 110V/120V/220V/240V Dimensions (L x H x P) 430 x 142 x 254 mm Poids 4,2 kg</p>



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ST-8044K



ALIGNMENT INSTRUCTIONS

ENGLISH

Notes:					
1. Band selector switch		AM (AM Alignment) FM (FM Alignment)		4. Maintain line voltage at rated voltage.	
2. FM muting & mode switch		off/mono		5. 300Ω FM dummy antenna Refer to fig. 1	
3. Active servo lock switch		off		6. Output of signal generator should be no higher than necessary to obtain an output reading.	
AM/FM SIGNAL GENERATOR		DIAL SETTING	INDICATOR (VTVM or SCOPE)	ADJUSTMENT POINTS	REMARKS
CONNECTION	FREQUENCY	AM ALIGNMENT			
1 High side through 0.001μF to AM antenna terminal. Common to chassis.	450kHz (30% Mod.) with 400 Hz (For United Kingdom to 470kHz)	Point of non-interference	Connect AC VTVM or scope to "OUTPUT" terminals.	T201 (1st IFT) Z201 (2nd IFT)	Adjust for maximum output.
2 Fashion loop of several turns of wire and radiate signal into loop of tuner	600kHz (30% Mod.) with 400Hz	600kHz	Connect AC VTVM or scope to "OUTPUT" terminals.	L202 (OSC Coil) L201 (ANT Coil)	Adjust for maximum output, Adjust L201 by moving coil bobbin along ferrite core.
3 Fashion loop of several turns of wire and radiate signal into loop of tuner	1500kHz (30% Mod.) with 400Hz	1500kHz	Connect AC VTVM or scope to "OUTPUT" terminal.	CT202 (OSC Trimmer) CT201 (ANT Trimmer)	Adjust for maximum output. Repeat steps (2) and (3).
FM IF ALIGNMENT					
4	No-Signal	Point of non-interference	Connect DC VTVM to R110 resistor. (Refer to fig. 2)	T101 (DISCRI IFT) A	•FM muting/mode switch to "on/auto" position. •Adjust T101 (A) core so that voltage measured in signal mode is 0V in 300mV range.
FM RF ALIGNMENT					
5 Connect to FM 300Ω antenna terminal through 300Ω FM dummy antenna.	90MHz (100% Mod.) with 400Hz weak input	90MHz	Connect scope to "OUTPUT" terminal.	L5 (OSC Coil) L3 (RF DET Coil) L1 (ANT Coil)	•Add weak input so that noise is included in the output wave form. •Make the adjustment so that the output wave form is vertically symmetrical. (Fig. 3)
6	106MHz (100% Mod. with 400Hz) weak input	106MHz	Connect scope to "OUTPUT" terminal.	CT3 (OSC Trimmer) CT2 (RF DET Trimmer) CT1 (ANT Trimmer)	•Repeat the steps 5 and 6 until the frequency correctly matches the dial scale.
FM MONO DISTORTION ALIGNMENT					
7 Connect to FM 300Ω antenna terminal through 300Ω FM dummy antenna.	100MHz (100% Mod. with 400Hz)	100MHz	Connect distortion meter to "OUTPUT" terminals.	T101 (DISCRI IFT) B	•Set the FM muting/mode switch to "on/auto" and then check step 4 in no signal mode. •If it is deflected, re-adjust A (primary side) of T101. •Adjust T101 (B) core so that distortion of right and left channels are minimized.
FM MUTING LEVEL ALIGNMENT (other products for [X, XA])					
8 Connect to FM 300Ω antenna terminal through 300Ω FM dummy antenna. Apply 16 dB (6.3μV) to tuner	100MHz (100% Mod. with 400Hz)	100MHz	Connect AC VTVM or scope to "OUTPUT" terminals.	VR150 (MUTING LEVEL)	•FM muting/mode switch to "on/auto". •Adjust so that output can be obtained.
FM MUTING LEVEL ALIGNMENT (Only product for [X, XA])					
9 Connect to FM 300Ω antenna terminal through 300Ω FM dummy antenna. Apply 10dB (3.2μV) to tuner.	100MHz (100% Mod. with 400Hz)	100MHz	Connect AC VTVM or scope to "OUTPUT" terminals.	VR150 (MUTING LEVEL)	•FM muting/mode switch to "on/auto". •Adjust so that output can be obtained.
FM MPX PILOT ALIGNMENT					
Using a frequency counter			Using alternate system		
1 100MHz Non-modulated mono signal applied to set. 2 FM muting/mode switch to "on". 3 Connect frequency counter to TP401 through resistor (100kΩ). 4 Adjust VR401 to 19kHz, ±30Hz.			1 Apply stereo signal from generator or stereo station to tuner. 2 Adjust VR401 until stereo indicator lights up. Cement arm of VR401 as shown in fig. 4.		
SEPARATION ALIGNMENT					
PREPARATIONS			ADJUSTING PROCEDURE		
1 Add 100MHz, 1kHz, 30% pilot 10% modulation, 60dB stereo signal to the tuner. 2 Connect AC VTVM or scope to output terminal through low pass filter (fc = 15 ~ 19kHz).			1 FM muting/mode switch to "on/auto". 2 Adjust VR402 so that R output is minimized when stereo modulator is in L (Lch. modulation) mode and that L output is minimized in R mode.		

ANWEISUNGEN FÜR ABGLEICHUNG

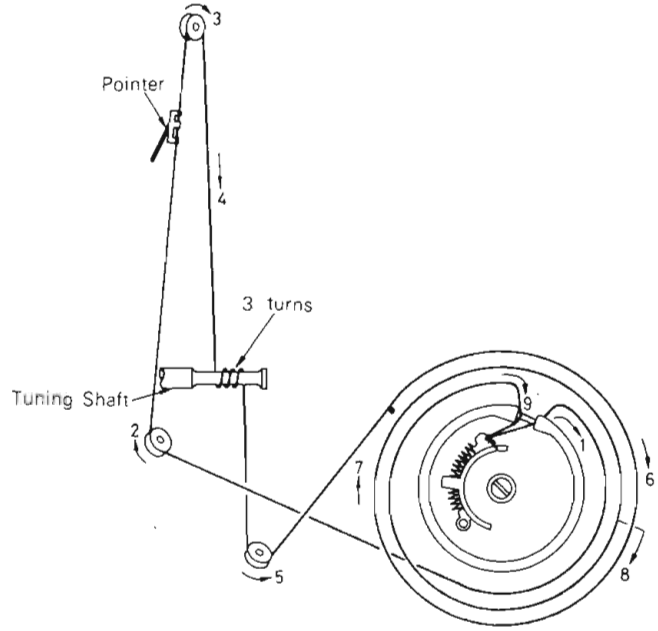
DEUTSCH

(Für Deutschland)

Anmerkungen:					
1. Bereichsschalter		AM (AM Abgleich) FM (FM Abgleich)		4. Netzspannung auf ihren Sollwert halten.	
2. FM Muting/Mode Schalter		off/mono		5. UKW-Kunstantenne, 300 ohm Vgl. Abb. 1.	
3. Active servo lock-Schalter		off		6. Der Ausgang des Meßsenders darf nicht höher sein als unbedingt notwendig für eine gute Ablesung.	
AM/UKW MESSENDER		SKALENZEIGEREIN- STELLUNG DES TUNER	ANZEIGEGERÄT (Röhrenvoltmeter oder Oszillograph bzw. Klirrfaktor-Meßgerät)	ABGLEICH- PUNKTE	BEMERKUNGEN
ANSCHLUSS	FREQUENZ	AM-ABGLEICH			
1 Heißes Ende des Meßsenders über einen 0.001μF Kondensator an den AM Antenneneingang schließen. Kaltes Ende an Masse	450kHz (400Hz Modul., 30%)	Kein Empfang	Wechselstrom Röhrenvoltmeter oder Oszillograph über den Ausgang "OUTPUT" schließen.	T201 (1. IFT) (A) T201 (2. IFT)	Auf max. Ausgang abgleichen.
2 Das Meßsendersignal induktiv in den Tuner speisen. Hierzu behelfsmäßig eine Rahmenantenne fertigen und an den Eingang schließen.	600kHz (400Hz Modul., 30%)	600kHz	Wechselstrom Röhrenvoltmeter oder Oszillograph über den Ausgang "OUTPUT" schließen.	L203 (Osc. Spule) L201 (Ant. Spule)	Auf max. Ausgang abgleichen. L201 wird abgeglichen, indem die Spule am Ferritstab entlanggeschoben wird.
3 Das Meßsendersignal induktiv in den Tuner speisen. Hierzu behelfsmäßig eine Rahmenantenne fertigen und an den Eingang schließen.	1500kHz (400Hz Modul., 30%)	1500kHz	Wechselstrom Röhrenvoltmeter oder Oszillograph über den Ausgang "OUTPUT" schließen.	CT202 (Osc. Trimmer) CT201 (Ant. Trimmer)	Auf max. Ausgang abgleichen. Schritt (2) und (3) sind zu wiederholen.
UKW ZF-ABGLEICH					
4	Kein Signal	Kein Empfang	Gleichspannungsmesser über den Ausgang R110 widerstand schließen. (Vgl. Abb. 2)	T101 (Diskriminator IFT) A	•FM muting/mode-Schalter auf "on/auto". •Den Kern von T101 (A) so justieren, daß die gemessene Spannung im signallosen Modus 0V im 300mV Bereich beträgt.
UKW-HF-ABGLEICH					
5 Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen.	87.5MHz (400Hz Modul., 100%)	87.5MHz (Frequenz min.)	Oszillograph über den Ausgang "OUTPUT" schließen.	L5 (Osc. Spule)	•Einen schwachen Eingang geben, bei dem Geräusch in der Ausgangswellenform enthalten wird.
6 Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen.	90MHz (400Hz Modul., 100%)	90MHz	Oszillograph über den Ausgang "OUTPUT" schließen.	L3 (Det. Spule) L1 (Ant. Spule)	•So einstellen, daß die Ausgangswellenform vertikal symmetrisch wird. (Abb. 3)
7 Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen.	106MHz (400Hz Modul., 100%)	106MHz	Oszillograph über den Ausgang "OUTPUT" schließen.	CT3 (Osc. Trimmer) CT2 (Det. Trimmer) CT1 (Ant. Trimmer)	•Die Einstellung von 5, 6 und 7 wiederholen, bis die Frequenz mit der Skala übereinstimmt.
ABGLEICH AUF MIN. VERZERRUNG IN STELLUNG UKW-MONO					
8 Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen.	100MHz (400Hz Modul., 100%)	100MHz	Klirrfaktor-Meßbrücke über den Ausgang "OUTPUT" schließen.	T101 (Diskriminator IFT) [B]	•FM muting/mode-Schalter auf "on/auto" stellen, dann in signalloser Mode den Schritt 4 feststellen. •Wenn Abweichung vorliegt, A (primäre Seite) von T101 wieder einstellen. •T101 (B) Kern für minimale Verzerrung der rechten und linken Kanäle justieren.
UKW-UKW-MUTING-ABGLEICH					
9 Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen. Meßsender auf 16 dB (6.3μV) einstellen.	100MHz (400Hz Modul., 100%)	100MHz	Wechselstrom Röhrenvoltmeter oder Oszillograph über den Ausgang "OUTPUT" schließen.	VR150	•FM muting/mode-Schalter auf "on/auto". •So einstellen, daß ein Ausgang zu vernehmen ist.
UKW-STEREO-DEKODER-ABGLEICH					
Unter Verwendung eines Zählers			Alternativ-Meßmethode		
1. Unmoduliertes Mono-Signal 100MHz in das Gerät speisen. 2. FM muting/mode-Schalter auf "on/auto" stellen. 3. Zähler über einen Widerstand 100K ohm an TP401 schließen. 4. VR401 auf 19kHz ±30Hz einstellen.			1. Stereosignal entweder von einem Stereogenerator- oder einem Sender einspeisen. 2. VR401 so einstellen, bis die Stereolampe aufleuchtet. Schleifer von VR401 sichern, wie in Abb. 4 gezeigt.		
KANALTRENNUNG-ABGLEICH					
1. Das Gerät auf 100MHz, 1kHz 30%, Pilot 10% Modulation, 60dB Stereosignal einstellen. 2. Wechselstrom-Röhrenvoltmeter oder Oszillograph durch Tiefpaß filter (fc = 15 ~ 19kHz) an Ausgangsanschlüsse des Gerätes anschließen.			3. FM muting/mode-Schalter auf "on/auto". 4. VR402 auf minimale Anzeige des R-Ausgangs bei Stereomodulator in L-(L-Kanalmodulation) Modus, und auf minimale Anzeige des L-Ausgangs in R-Modus abgleichen.		

■ DIAL CORD INSTALLATION GUIDE

- For threading a fresh cord, proceed as follows.
 1. Prepare a fresh cord more than 180 cm (70-15/16") in length.
 2. Bring the variable capacitor into a state where the drum is completely turned to the right (maximum capacity and lowest frequency for the variable capacitor).
 3. Direct the cord in the order from 1 to 9.
 4. Stretch the cord in such a tension as the spring length is elongated by 1.5 times that of the original state.
 5. Fix the knot of the cord with the bond.



■ ALIGNMENT POINTS

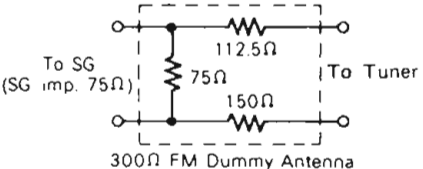


Fig. 1

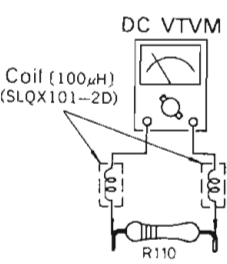
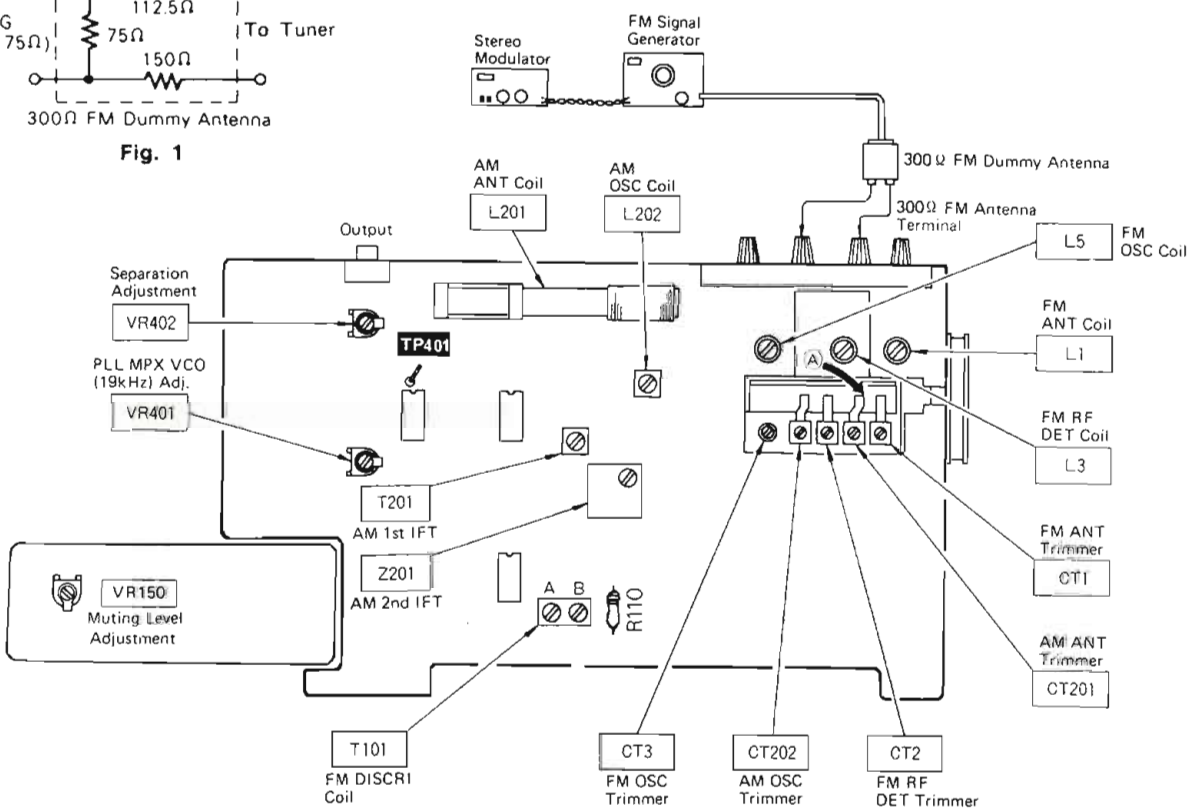


Fig. 2

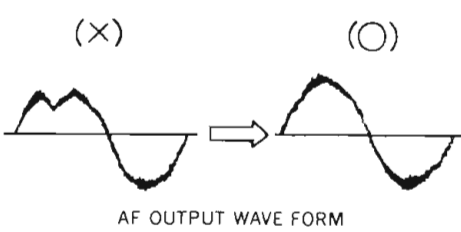
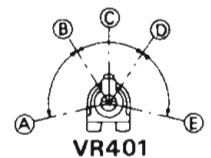


Fig. 3



- A - B, D - E: Stereo OFF Position.
- B - D: Stereo ON Position (Indicator Lighting).
- C: Adjust Point of Pilot Circuit.

Fig. 4

INSTRUCTIONS D'ALIGNEMENT FRANÇAIS

AM/FM GENERATEUR		AIGUILLE SUR LE CADRAN	INDICATEUR (VOLT-METRE ELECTRONIQUE OSCILLOSCOPE OU DISTORSIONMETRE)	POINTS DE REGLAGE	OBSERVATIONS
BRANCHEMENT	FREQUENCE				
ALIGNEMENT AM					
1. Côté chaud, à travers 0.001µF, sur le trimmer de l'antenne AM, commun au châssis	455kHz (modulé à 30% par 400Hz)	Point sans signal	C.A. voltmètre électronique ou oscilloscope sur prise de sortie de l'appareil.	T201 (1 transfo FI) Z201 (2 transfo FI)	Réglez au maximum de signal de sortie.
2. Faire une boucle de quelques tours et rayonner le signal dans le cadre de l'ampli-tuner.	600kHz (modulé à 30% par 400Hz)	600kHz	C.A. voltmètre électronique ou oscilloscope sur prise de sortie de l'appareil.	L202 (bobine OSC) L201 (bobine ANT)	Réglez au maximum de signal de sortie. Réglez L201 en déplaçant la bobine le long du noyau de ferrite.
3. Faire une boucle de quelques tours et rayonner le signal dans le cadre de l'ampli-tuner.	1500kHz (modulé à 30% par 400Hz)	1500kHz	C.A. voltmètre électronique ou oscilloscope sur prise de sortie de l'appareil.	CT202 (trimmer OSC) CT201 (trimmer ANT)	Réglez au maximum de signal de sortie. Recommencez les étapes (2) et (3).
ALIGNEMENT FI-FM					
4. Sans signal	Sans signal	Point sans signal	C.C. voltmètre sur prise R110 résistance. (Voir fig. 2)	T101 (A) (transfo FI discric)	<ul style="list-style-type: none"> Commutateur de silencieux sur "on/auto". Régler le noyau T101 (A) de telle sorte que le voltage mesuré dans le mode sans signal, soit de 0V dans la gamme des 300mV.
ALIGNEMENT RF-FM					
5. Branchez sur la prise d'antenne FM à travers une antenne fictive FM	90MHz (modulé à 100% par 400Hz)	98MHz	Oscilloscope sur prise de sortie du tuner.	L5 (bobine OSC) L3 (bobine DET) L1 (bobine ANT)	<ul style="list-style-type: none"> Appliquer une entrée faible de telle sorte que le parasite soit compris dans la forme de l'onde de sortie. Faire le réglage de telle sorte que la forme de l'onde de sortie soit verticalement symétrique. (Voir fig. 3) Refaire les réglages 5 et 6 jusqu'à ce que la fréquence corresponde correctement avec l'échelle du cadran.
6. Branchez sur la prise d'antenne FM à travers une antenne fictive FM.	106MHz (modulé à 100% par 400Hz)	106MHz	Oscilloscope sur prise de sortie du tuner.	CT3 (trimmer OSC) CT2 (trimmer DET) CT1 (trimmer ANT)	
REGLAGE DE LA DISTORSION FM EN MONO					
7. Branchez sur la prise d'antenne FM à travers une antenne fictive FM.	100MHz (modulé à 100% par 400Hz)	100MHz	Distorsiomètre sur prise de sortie du tuner.	T101 (Transfo FI discric) (B)	<ul style="list-style-type: none"> Placer la commutateur Sourdisse FM/Mode sur "on/auto" et vérifier l'étape 4 dans un mode sans signal. S'il est déplacé, re-régler A (côté primaire) de T101. Régler le noyau T101 (B) de telle sorte que la distorsion des canaux droit et gauche soit la plus faible.
REGLAGE DU SEUIL DU SILENCIEUX D'ACCORD					
8. Branchez sur la prise d'antenne FM à travers une antenne fictive FM. Niveau de sortie du générateur 16 dB (6.3µV).	100MHz (modulé à 100% par 400Hz)	100MHz	C.A. voltmètre électronique ou oscilloscope sur prise de sortie de l'appareil.	VR150	<ul style="list-style-type: none"> Commutateur de silencieux sur "on/auto" Régler pour obtenir une lecture en sortie.
ALIGNEMENT DU PILOTE MULTIPLEX FM					
Avec un fréquencemètre			Par un autre système		
1. Signal mono 100MHz non modulé appliqué à l'appareil. 2. Commutateur de silencieux sur "on/auto". 3. Branchez le fréquencemètre sur TP401 à travers une résistance de 100kΩ. 4. Régler VR401 sur 19kHz ±30Hz.			1. Appliquez à l'appareil un signal stéréo provenant d'un générateur ou de la réception d'un émetteur. 2. Régler VR401 jusqu'à ce que l'indicateur de stéréophonie s'allume. Collez le curseur de VR401 comme indiqué sur la fig. 4.		
REGLAGE DE LA SEPARATION DES CANAUX					
Préparations			Procédure de réglage		
1. Ajouter 100MHz, 1kHz, Modulation, pilote 10%, signal stéréophonique 60dB, à l'appareil. 2. Brancher un voltmètre électronique C.A. ou un oscilloscope aux bornes de sortie, par l'intermédiaire du filtre passe-bas (fc = 15 ~19kHz).			1. Commutateur de silencieux sur "on/auto". 2. Régler VR402 de telle sorte que la sortie droite soit minimale quand la commande d'accord stéréophonique est dans le mode gauche (modulation du canal gauche) et que la sortie gauche soit minimale dans mode droit.		

TO REMOVE CABINET AND BOTTOM BOARD

- To remove cabinet**
 - Remove the 4 screws. (nos. ① ~ ④ screws in fig. 5).
 - Remove the 4 screws. (nos. ⑤ ~ ⑧ screws in fig. 6).
 - Sliding it toward **A** direction and lifting it upward as shown in fig. 5.
 - When the cabinet is installed, insert the lug of cabinet into the space between the front panel and chassis as shown in fig. 7.
- To remove bottom board**
 - Remove the 3 screws. (nos. ⑨ ~ ⑪ screws in fig. 8).
 - Remove the 4 feet screws. (nos. ⑫ ~ ⑮ screws in fig. 8).
 - Remove bottom board.

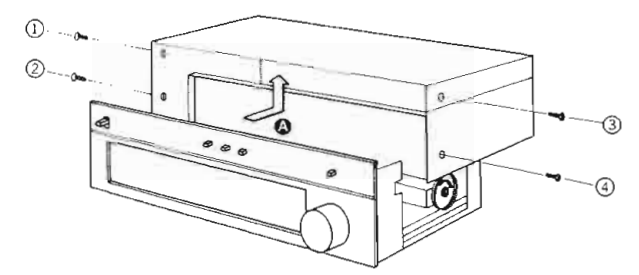


Fig. 5

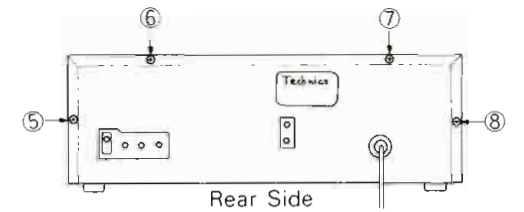


Fig. 6

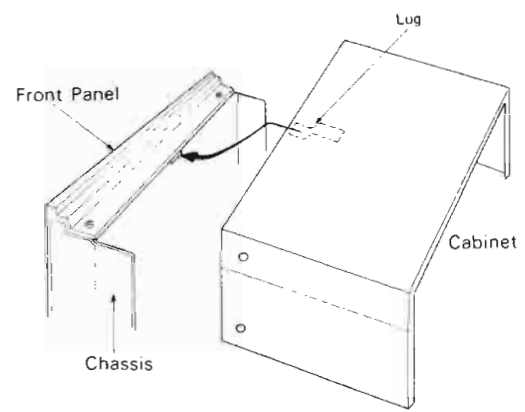


Fig. 7

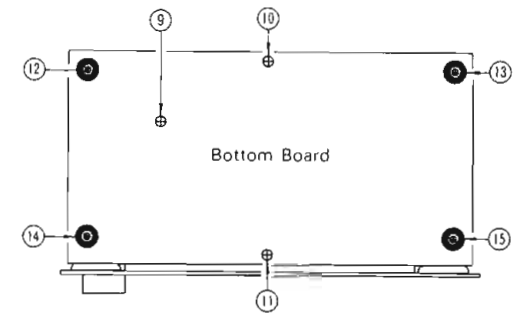
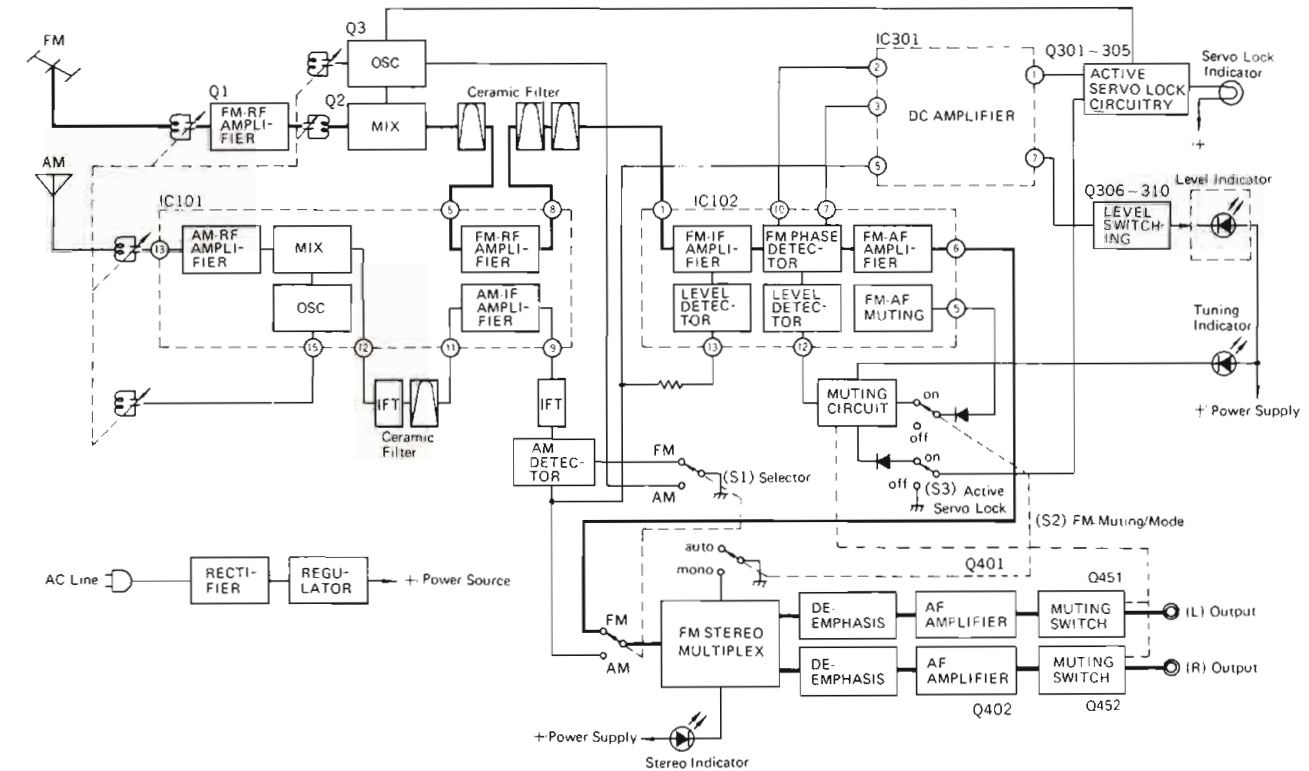


Fig. 8

BLOCK DIAGRAM



REPLACEMENT PARTS LIST Electric Parts

NOTES: 1. Part numbers are indicated on most mechanical parts. Please use this part number for parts orders. 2. A triangle indicates that only parts specified by the manufacturer be used for safety.

Table with columns: Ref. No., Part No., Part Name & Description. Section: RESISTORS. Lists parts R1 through R329 with their respective specifications.

Table with columns: Ref. No., Part No., Part Name & Description. Lists parts R330 through R501 with their respective specifications.

Table with columns: Ref. No., Part No., Part Name & Description. Section: CAPACITORS. Lists parts C1 through C304 with their respective specifications.

Table with columns: Ref. No., Part No., Part Name & Description. Lists parts C350 through C413 with their respective specifications.

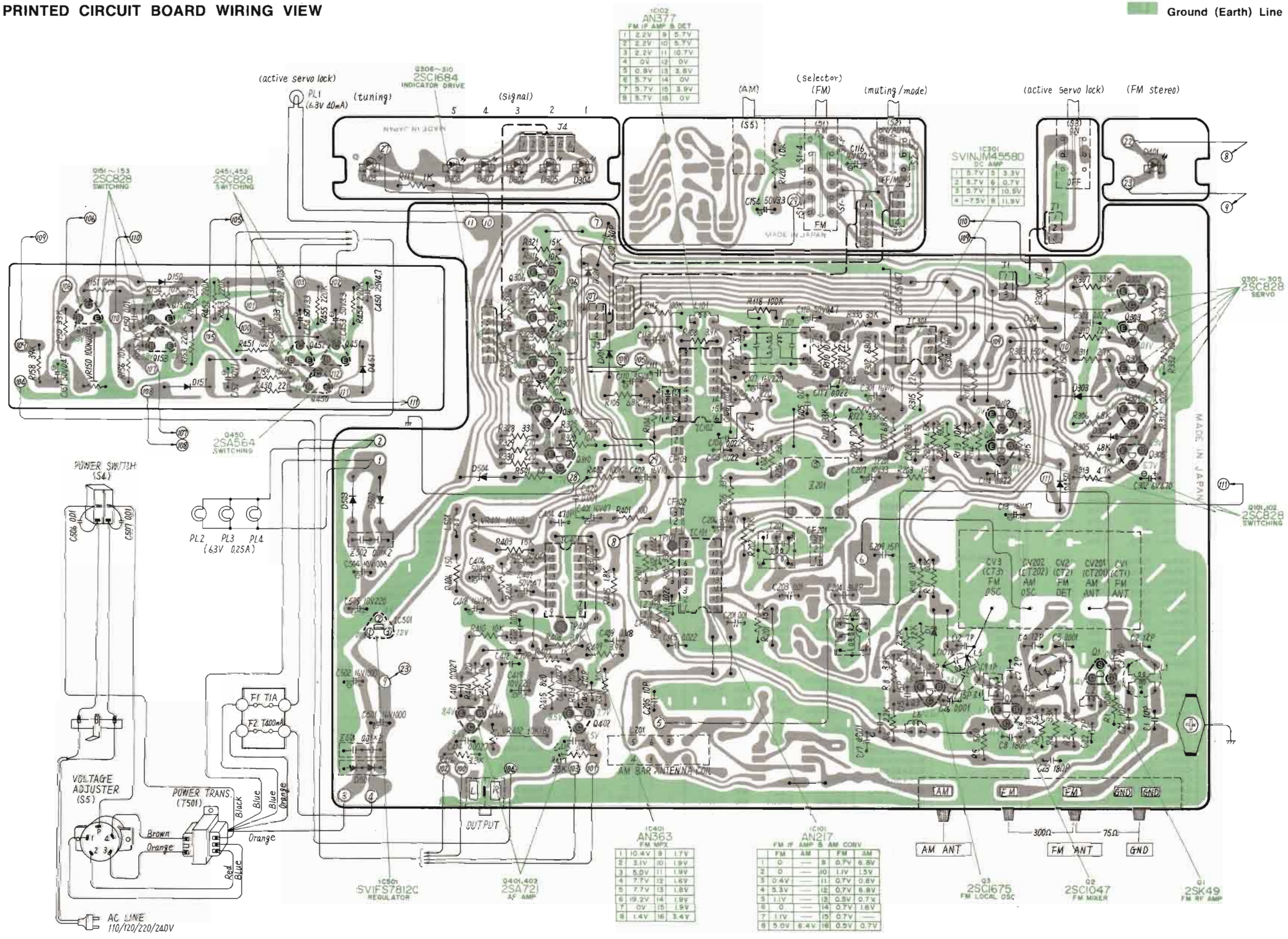
Table with columns: Ref. No., Part No., Part Name & Description. Section: INTEGRATED CIRCUITS, TRANSISTORS, DIODES, COILS and TRANSFORMERS. Lists parts IC101 through T201 with their respective specifications.

Table with columns: Ref. No., Part No., Part Name & Description. Lists parts C414 through C507 with their respective specifications.

Table with columns: Ref. No., Part No., Part Name & Description. Section: CERAMIC FILTERS, COMPONENT COMBINATIONS, VARIABLE RESISTORS, VARIABLE CAPACITORS, FUSES, LAMPS, SWITCHES. Lists parts CF101 through S5 with their respective specifications.

PRINTED CIRCUIT BOARD WIRING VIEW

Ground (Earth) Line



IC102 AN377 FM IF AMP & DET

1	2.2V	9	5.7V
2	2.2V	10	5.7V
3	2.2V	11	10.7V
4	0V	12	0V
5	0.8V	13	3.8V
6	5.7V	14	0V
7	5.7V	15	3.9V
8	5.7V	16	0V

IC301 SVINJM45580 DC AMP

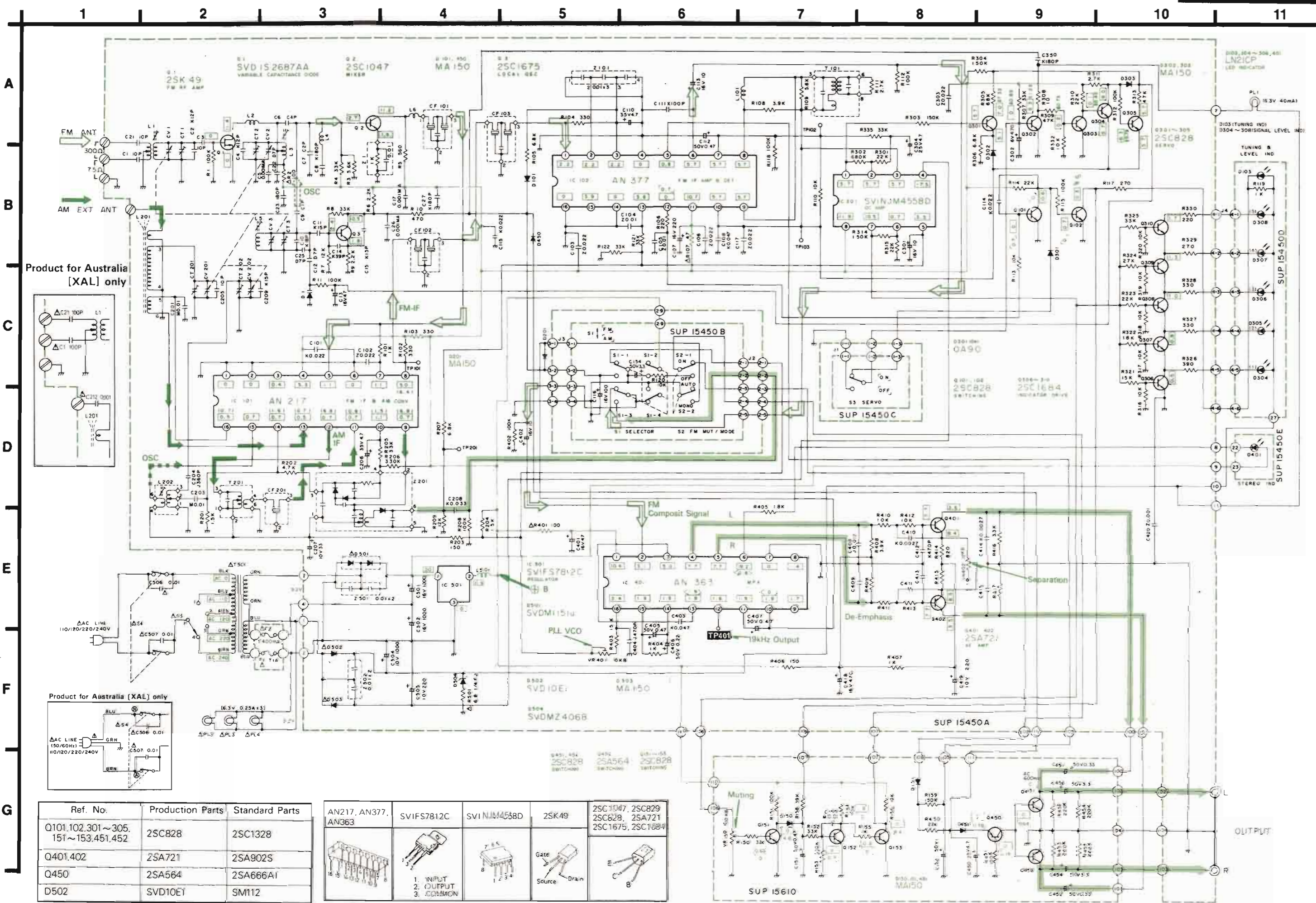
1	5.7V	5	3.3V
2	5.7V	6	0.7V
3	5.7V	7	10.5V
4	-7.5V	8	11.9V

IC401 AN363 FM MPX

1	10.4V	9	1.7V
2	3.1V	10	1.9V
3	8.0V	11	1.9V
4	7.7V	12	1.6V
5	7.7V	13	1.8V
6	19.2V	14	1.9V
7	0V	15	1.9V
8	1.4V	16	3.4V

IC101 AN217 FM IF AMP & AM CONV

1	0	8	0.7V	6.8V
2	0	10	1.1V	1.5V
3	0.4V	11	0.7V	0.8V
4	0.3V	12	0.7V	0.8V
5	1.1V	13	0.5V	0.7V
6	0	14	0.7V	1.6V
7	1.1V	15	0.7V	—
8	9.0V	16	0.5V	0.7V



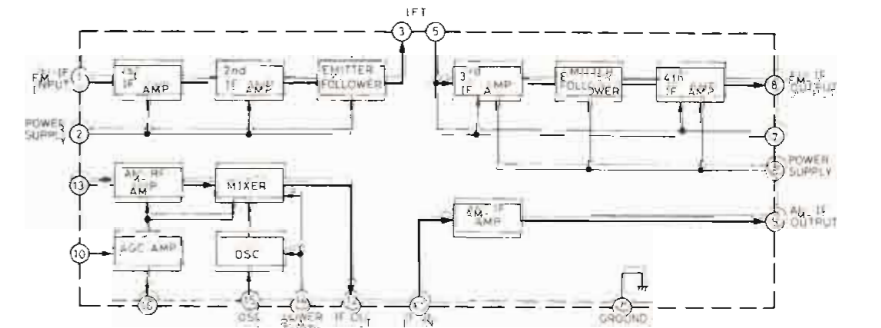
SCHEMATIC DIAGRAM

- This schematic diagram may be modified at any time with the development of new technology.
- Notes:
- S1-1 ~ S1-4 : Selector switch in "FM" position.
 - S2-1, S2-2 : FM muting/mode switch in "on/auto" position.
 - S3 : Active servo lock switch in "on" position.
 - S4 : Power source switch in "on" position.
 - S5 : Voltage adjuster switch in "240V" position.
 - Indicated voltage are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.
 - Figures in stand for DC voltage in FM (60dB signal reception) mode.
 - Figures in stand for DC voltage in AM mode.
 - Figures in stand for DC voltage in FM stereo signal reception mode.
 - Figures in stand for DC voltage in servo lock circuit operation.
 - Figures in stand for DC voltage in FM (no signal) muting to on mode.
 - △ indicates that only parts specified by the manufacturer be used for safety.
 - Signal lines FM AM AF
 - To represent transistors, Q is used instead of TR. (Ex. TR1 → Q1)

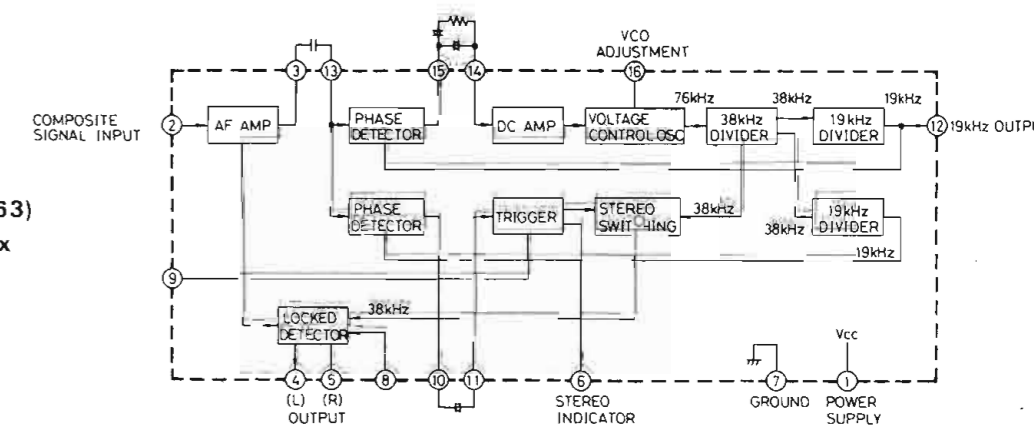
BLOCK DIAGRAM OF IC

This is the basic block diagram of the inside circuit of IC. In an actual circuit, there may be sometimes idle terminals or some different functions other than the basic circuit.

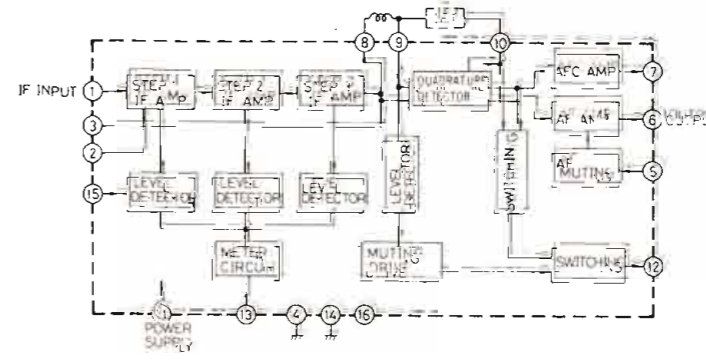
IC101 (AN217)
FM IF Amplifier & AM Converter



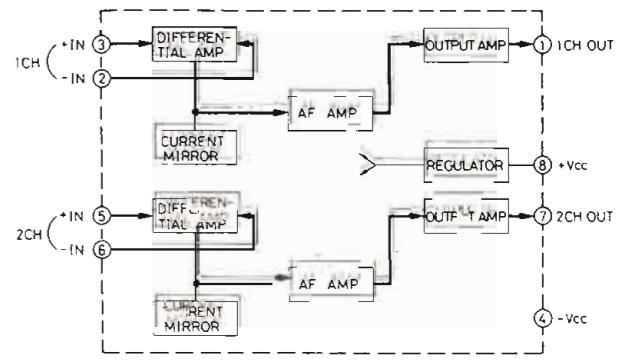
IC401 (AN363)
FM Multiplex



IC102 (AN377)
FM IF Amplifier & Detector



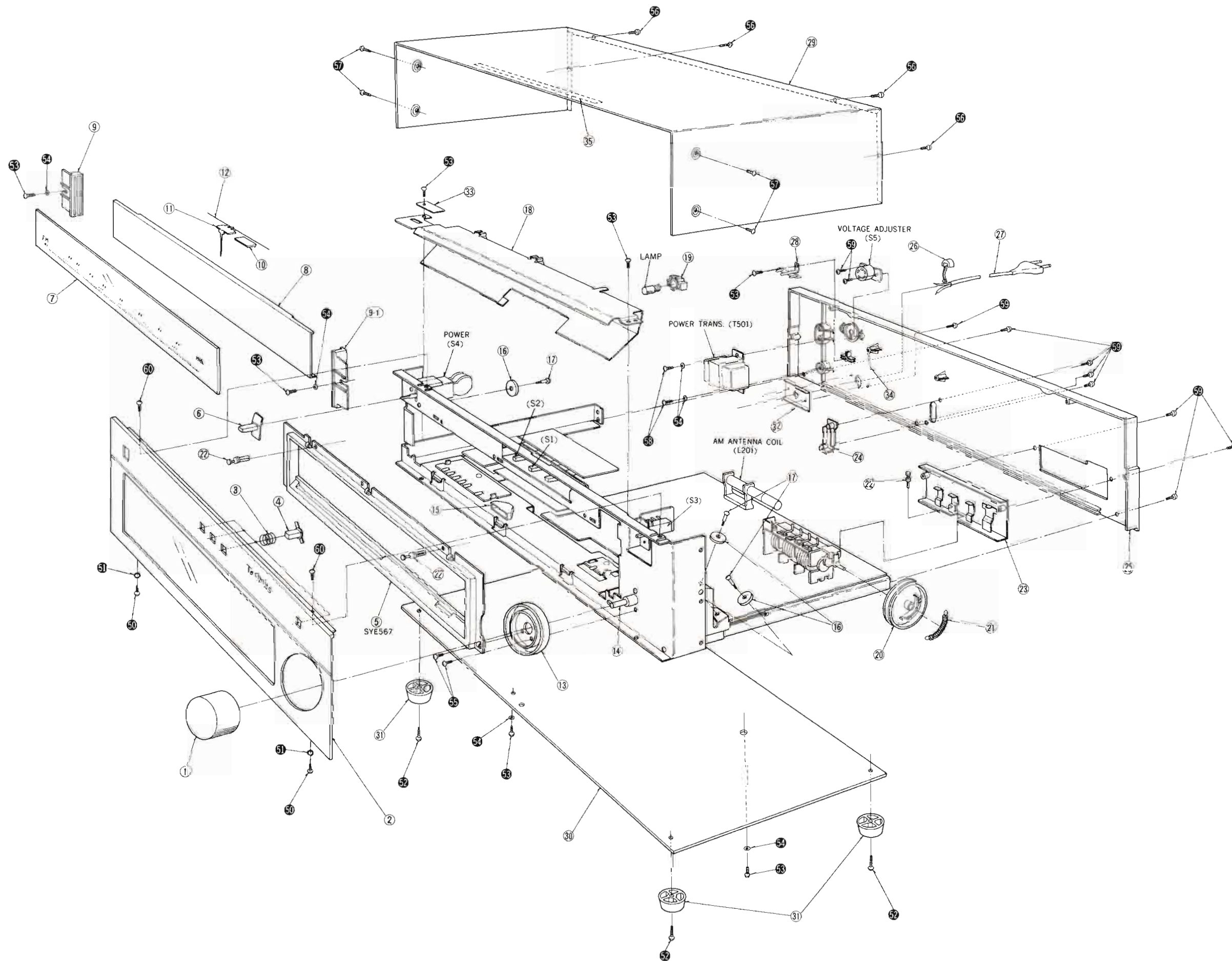
IC301 (SVNJM4558D)
DC Amplifier



Ref. No.	Production Parts	Standard Parts
Q101,102,301~305, 151~153,451,452	2SC828	2SC1328
Q401,402	2SA721	2SA902S
Q450	2SA564	2SA666AI
D502	SVD10E1	SM112

IC No.	Part No.	Pin 1	Pin 2	Pin 3
AN217, AN377, AN363	SVI7812C	INPUT	OUTPUT	COMMON
SVI NJM4558D	2SA721	1	2	3
2SK49	Gate	Source	Drain	B
2SC1047, 2SC829, 2SC828, 2SA721, 2SC1675, 2SC1684	2SA564	1	2	3

EXPLODED VIEW



REPLACEMENT PARTS LIST ··· Cabinet & Chassis Parts

NOTES: 1 Part numbers are indicated on most mechanical parts
Please use this part number for parts orders.
2 Δ indicates that only parts specified by the manufacturer
be used for safety.

Ref. No.	Part No.	Part Name & Description
CABINET and CHASSIS PARTS		
1	SBN819	Knob, Tuning Control
2	SGWT8044N	Panel, Front (Pearl Silver)
3	SUS123-1	Spring, Push Switches
4	SBC197	Button, Push Switches
5	SYE567-1	Ornament, Dial Scale
6	SBD19	Knob, Power Source Switch
7	SKD3610	Scale, Dial
8	SDH475-1	Reflector Plate, Dial Light
9	SGX6609	Mounting, Dial Scale (Left Side)
9-1	SGX6609-1	Mounting, Dial Scale (Right Side)
10	SHP35	Paper, Dial Pointer Slide
11	SDP1131	Pointer, Dial
12	SDZ051-2	Cord, Dial 180cm(70-15/16")
13	SGX6613	Ornament, Tuning Knob
14	SDT8057	Shaft, Tuning Ass'y (w/Flywheel)
15	SHG1483	Bracket, Servo Lock Indicator Lamp
16	RDR8-1	Pulley, Dial Cord
17	SHD3X1F	Shaft, Pulley
18	SMP269	Cover, Dial Light
19	SJS2103	Socket, Dial Lamps
20	SDD47-1	Drum, Variable Capacitor
21	SDSA4121	Spring, Dial Cord
22	SHR401-1	Latch, Antenna Terminal & Scale Ornament M'tg
23	SJF4419-2	Terminal, FM/AM Antenna
24	SJF3223	Terminal, Output
25 (E)only	SGP1630-1A	Rear Panel
25 (X,XA,XAL)	SGP1630-1B	Rear Panel
25 (XGH,EG,EB)	SGPT8044D	Rear Panel, SGP1630-1A with Name Plate (SGT18090)
26	SHR127	Bushing, AC Cord
26 (XAL)only	SHR131	Bushing, AC Cord
27	RJA232C	AC Cord, Power Source
27 (XAL)only	QFC1207M	AC Cord, Power Source
28	SJR205	Terminal, AC Cord
29	SKA10410	Cabinet
30	SKU731	Bottom Board
31	SKLA7-1	Foot, Bottom Board
32 (XAL)only	SGP9015-2	Plate, AC Cord M'tg
32	SGP9015-3	Plate, AC Cord M'tg
33	SHR5023	Rubber
34	SXE513-1	Clamper, Lead Wire
35	SHS6111	Cloth, Cabinet
SCREWS and WASHERS		
①	XTB3+8BFZ	Screw, Front Panel M'tg (Lower Side)
②	XWC3BFZ	Washer, Front Panel Lower Screws
③	XTB3+16B	Screw, Feet M'tg
④	XTB3+8B	Screw, Bottom Board, Lamp Cover, & Scale Mounting M'tg
⑤	XWG3	Washer
⑥	XTB3+10BFZ	Screw, Tuning Knob Ornament M'tg
⑦	XTB3+8BFN	Screw, Cabinet M'tg
⑧	XTB4+8FFN	Screw, Cabinet M'tg
⑨	XTB3+10B	Screw, Power Transformer M'tg
⑩	XTB3+10BFZ	Screw, Rear Panel & Voltage Adjuster M'tg
⑪	XTB3+8FFZ	Screw, Front Panel M'tg (Upper Side)

(E) and (EG) are available in Scandinavia and European only.
(X) and (XA) are available in Asia, Latin America, Middle East and Africa only.
(XAL) is available in Australia only.
(XGH) is available in Holland only.
(EB) is available in Belgium only.

■ **REPLACEMENT PARTS LIST** ... **Accessories & Packing Parts**

Ref. No.		Part No.	Part Name & Description
ACCESSORIES			
A1		SSA253	Cord, FM Indoor Antenna
A2		SJP2129-5	Cord, Connection Shield
A3 [X, XA] only	⚠	SJP5213-1	Plug Adapter, Power Source
PACKING PARTS			
P1		SPP575	Polyethylene Bag
P2		SPS1825	Pad, Left Side
P2 [XAL] only		SPS1825-1	Pad, Left Side
P3		SPS1827	Pad, Right Side
P3 [XAL] only		SPS1827-1	Pad, Right Side
P4 [E]		SPG1803	Carton Box
P4 [EG, EB, XGH]		SPG1805	Carton Box
P4 [X, XA]		SPG1861	Carton Box
P4 [XAL]		SPG1863	Carton Box
P5		SQF10057	Instructions Book, Printed Matter

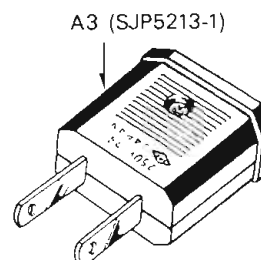
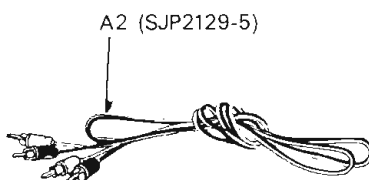
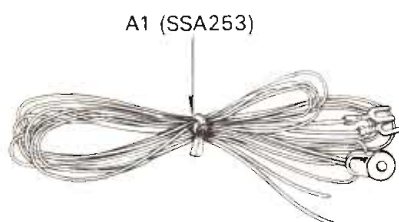
■ **CHANGE OF PARTS LIST**

ST-8044K (E), (EG), (X), (XA), (XAL), (EB), (XGH)

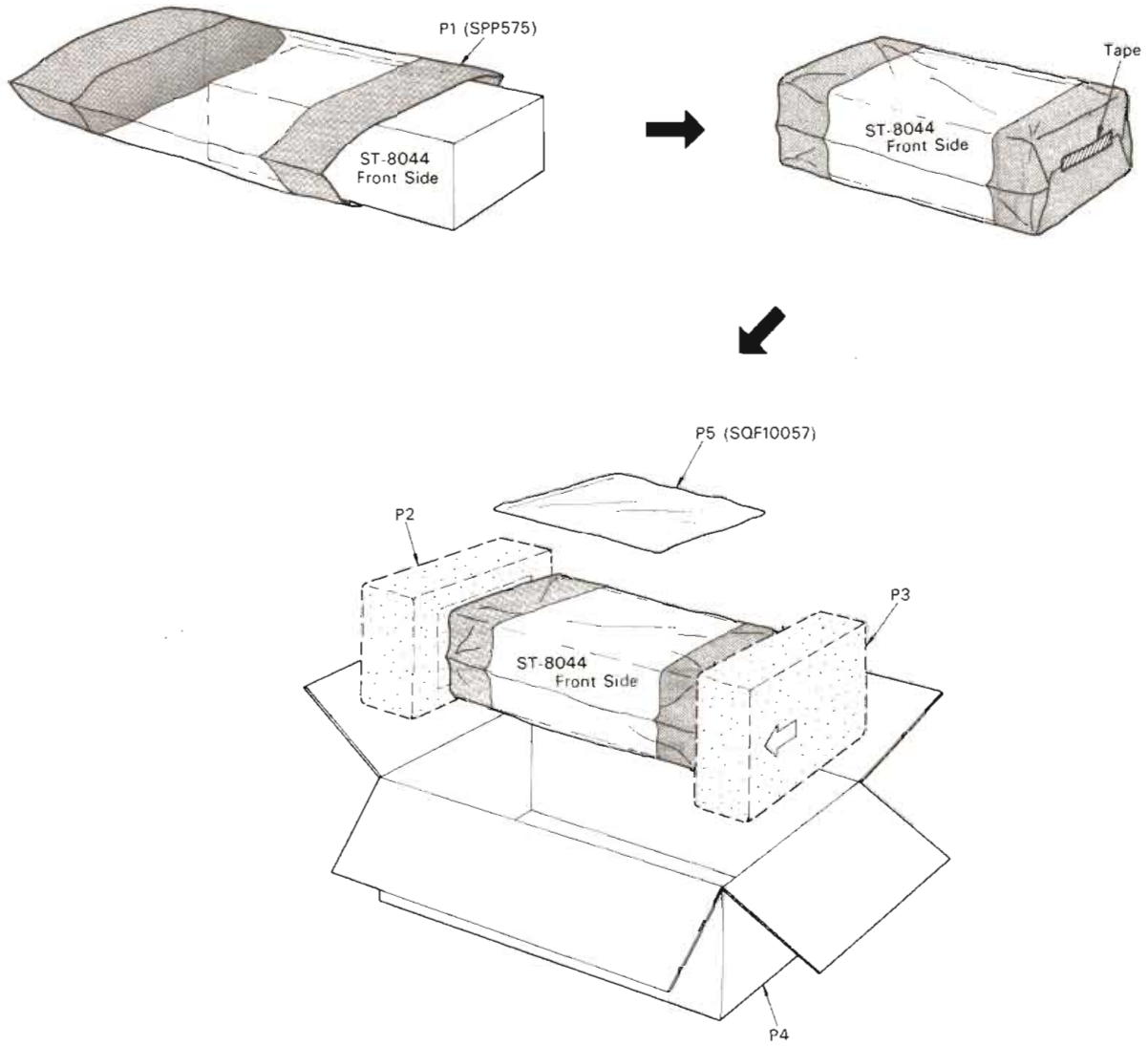
Note: This parts list included only the changes of the model ST-8044 parts list.

Ref. No.	Change of Part No.		Part Name & Description
	ST-8044	→ ST-8044K	
CABINET and CHASSIS PARTS			
1	SBN819	SBN819-1	Knob, Tuning Control
2	SGWT8044N	SGWT8044KD	Panel, Front [Black]
5	SYE567-1	SYE567-2	Ornament, Dial Scale
6	SBD19	SBD19-1	Knob, Power Source Switch
7	SKD3610	SKD3611	Scale, Dial
25	SGP1630-1A [E]	SGP1630-1C [E]	Rear Panel
	SGP1630-1B [X, XA, XAL]	SGPT8044KX [X, XA, XAL]	Rear Panel, SGP1630-1B with Name Plate (SGT19990)
	SGPT8044D [XGH, EG, EB]	SGPT8044KD [XGH, EG, EB]	Rear Panel, SGP1630-1C with Name Plate (SGT19570)
29	SKA10410	SKA10417	Cabinet
55	XTB3+8BFN	XTB3+8BFZ	Screw, Cabinet M'tg
57	XTB4+8FFN	XTB4+8FFZ	Screw, Cabinet M'tg
PACKING PARTS			
P4	SPG1803 [E]	SPG1957 [E]	Carton Box
	SPG1805 [EG, EB, XGH]	SPG1959 [EG, EB, XGH, X, XA]	Carton Box
	SPG1861 [X, XA]		
	SPG1863 [XAL]	SPG2033 [XAL]	Carton Box

■ **ACCESSORIES**



■ PACKINGS



■ NEW INDICATION MARK

The **S** mark has been used for the indication of specified parts for an assurance of safety, but it has been changed to **△** mark. When replacing parts, be sure to use parts with correct numbers with reference to the circuit drawing or the repair parts list.

