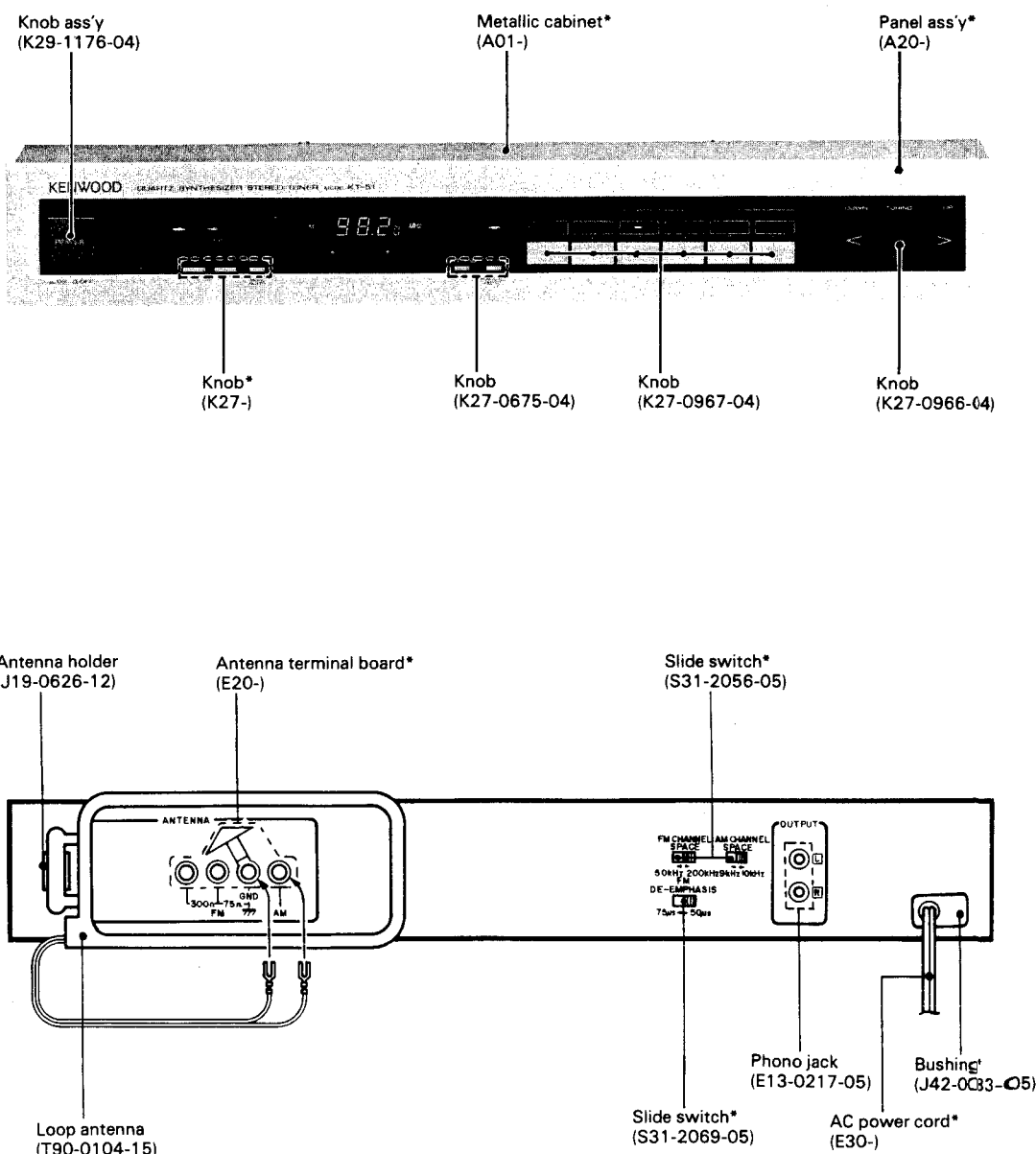


## KENWOOD

# KT-51/51B KT-51L/51LB

### QUARTZ SYNTHESIZER STEREO TUNER

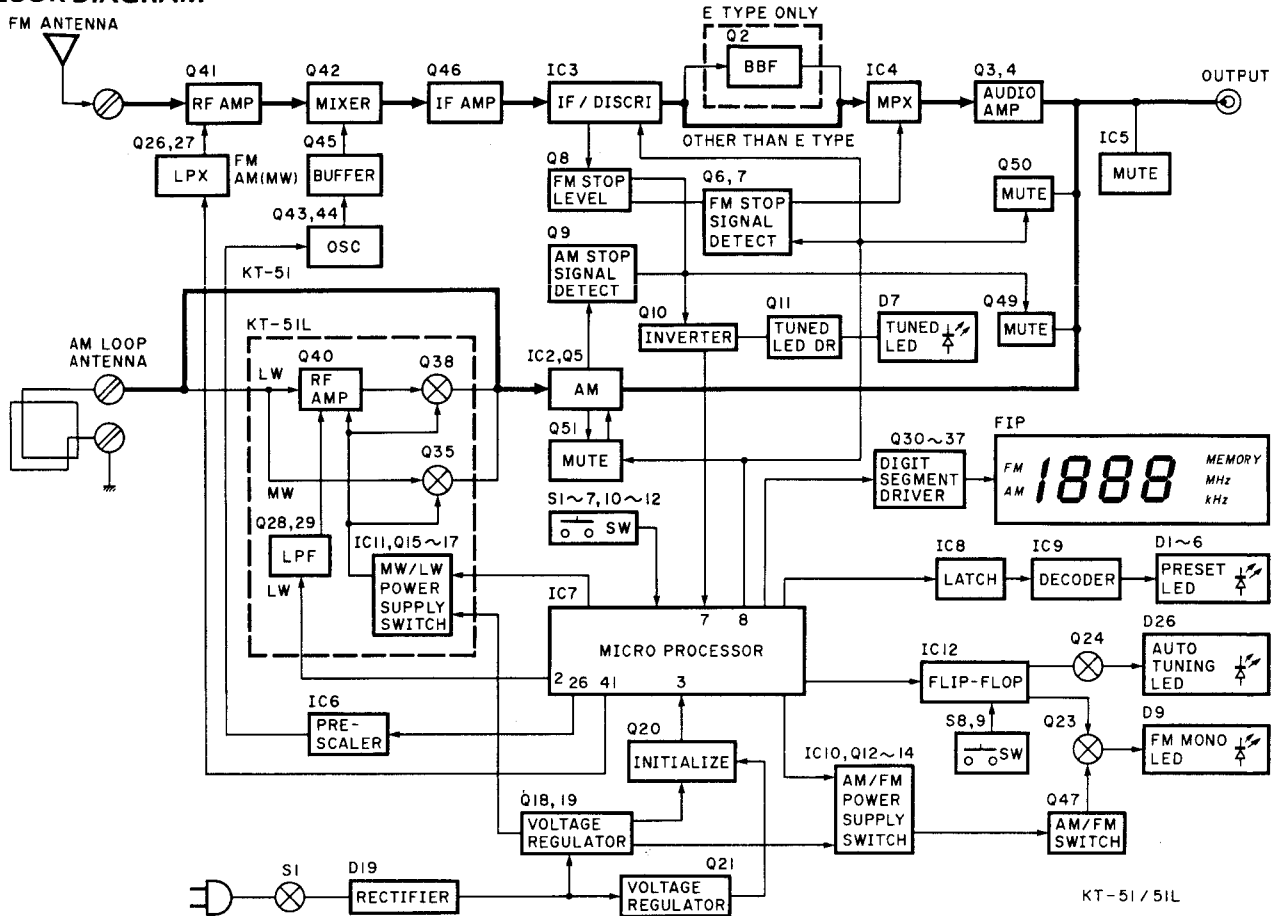


There are two kinds of pc boards used in KT-51, KT-51B, KT-51L and KT-51LB. Make sure you refer to the appropriate schematic diagram when repairing.

\*Refer to parts list on page 9 for KT-51 and KT-51B, page 18 for KT-51L and KT-51LB. Photo is KT-51.

## BLOCK DIAGRAM/DISASSEMBLY FOR REPAIR

### BLOCK DIAGRAM



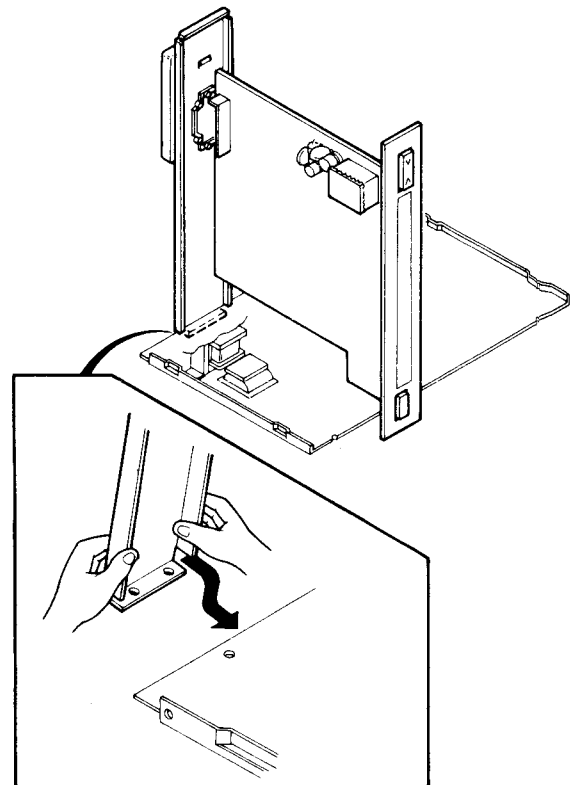
### DISASSEMBLY FOR REPAIR

#### Before repair

There is no frame to connect the front and rear panel in this KT-51. Instead, the pc board connects these panels, but the height of the KT-51 is not enough to stand the pc board upright. For these reasons, we recommend the following way of standing the pc board upright when repairing.

1. Remove the screws on the bottom plate.
2. Hook the left-hand side slit of the rear panel and lower the front panel on to the bottom plate as shown in the figure.

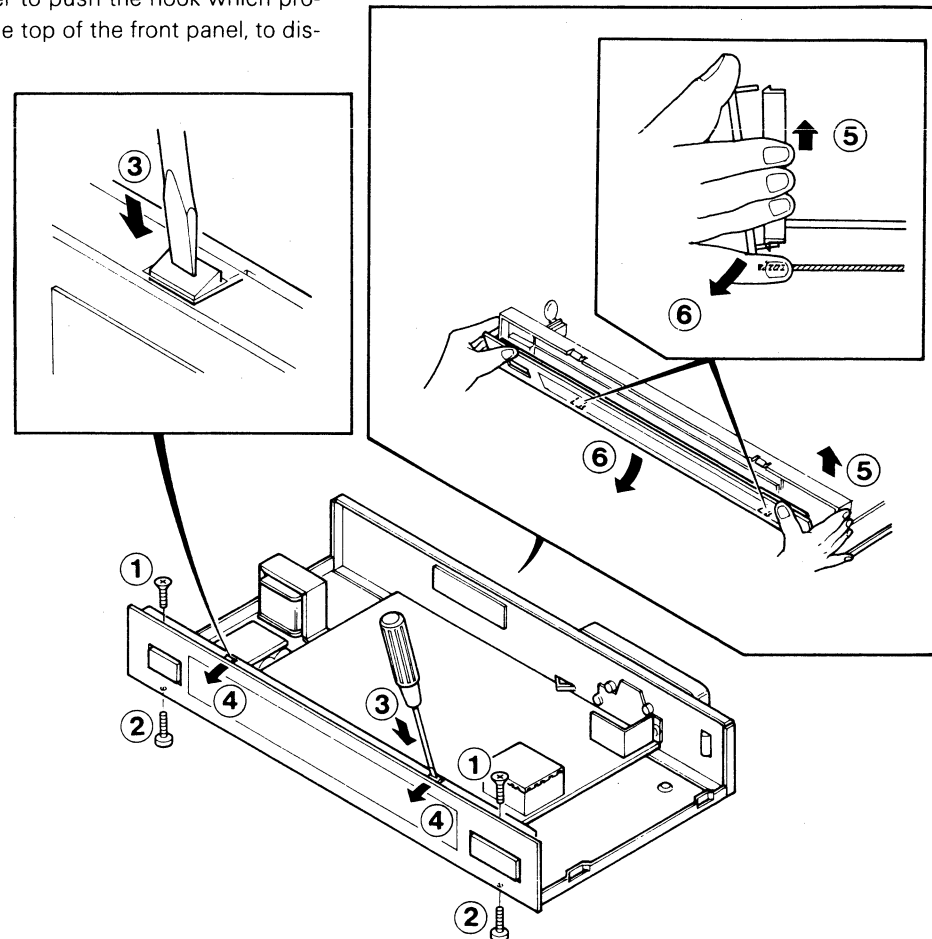
This will make the pc board stand stable and upright making easier to check and replace the components on the pc board.



## DISASSEMBLY FOR REPAIR

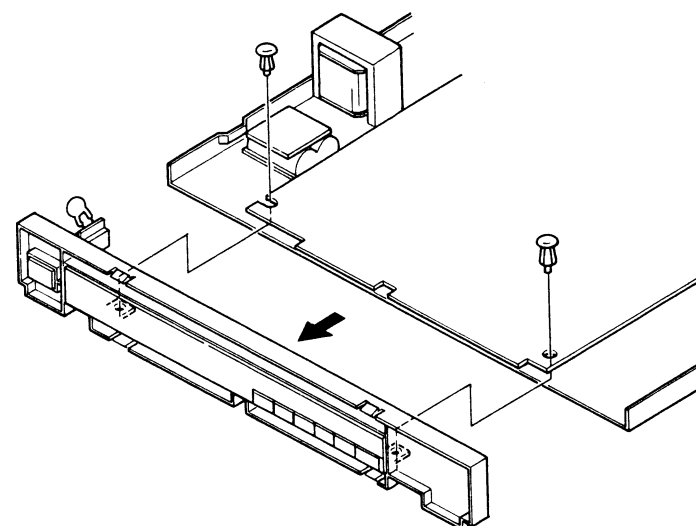
### REMOVAL OF FRONT PANEL

1. Remove 3 screws retaining the front panel to the bottom plate.
2. Remove 2 screws at the bottom and 2 screws on the top of the front panel.
3. Use a standard screwdriver to push the hook which projects through the hole at the top of the front panel, to disengage.
4. Slightly tilt the front panel and lift the sub panel to disengage the bottom hook.
5. The front panel will be removed by pulling it forward.

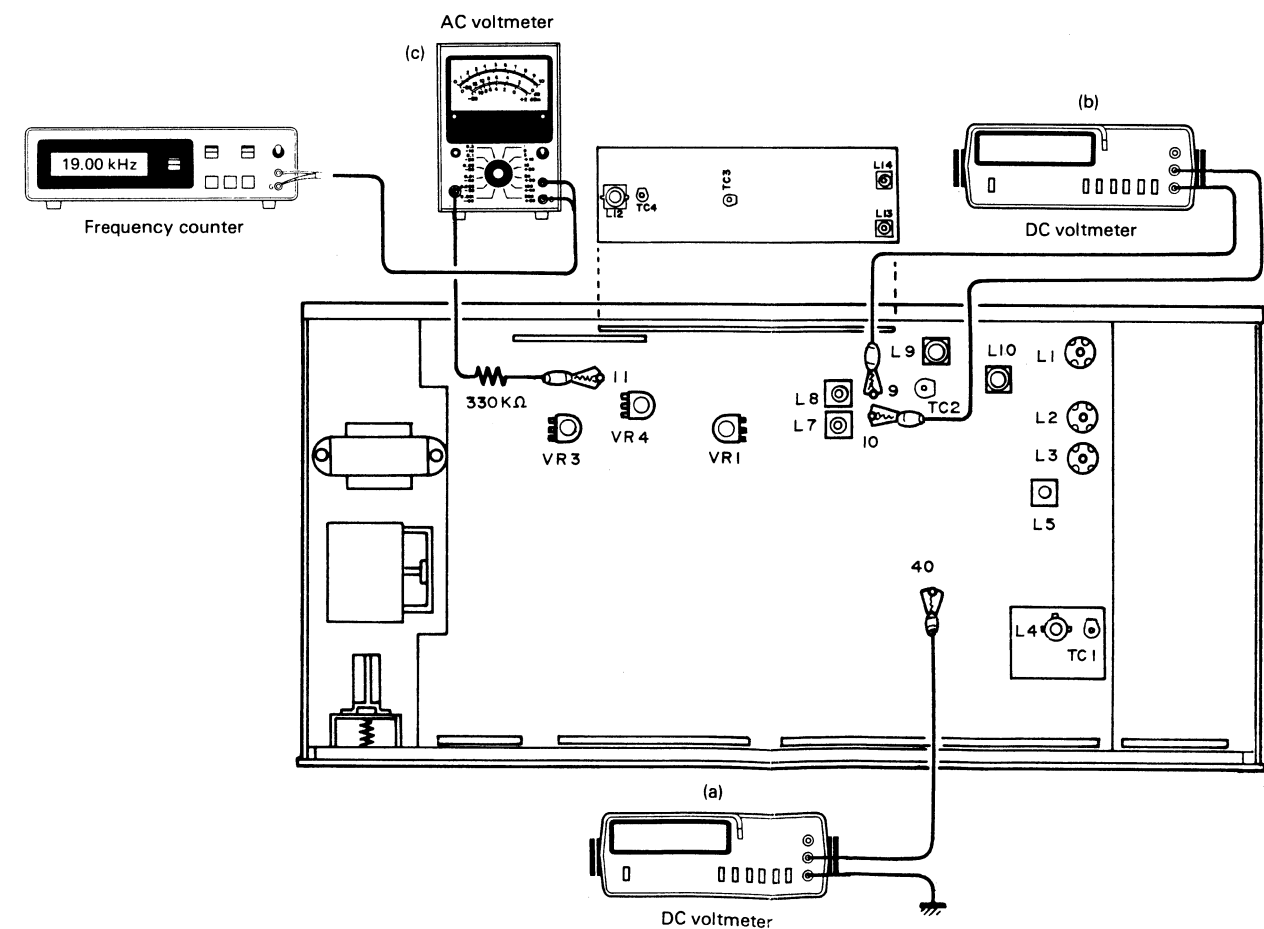
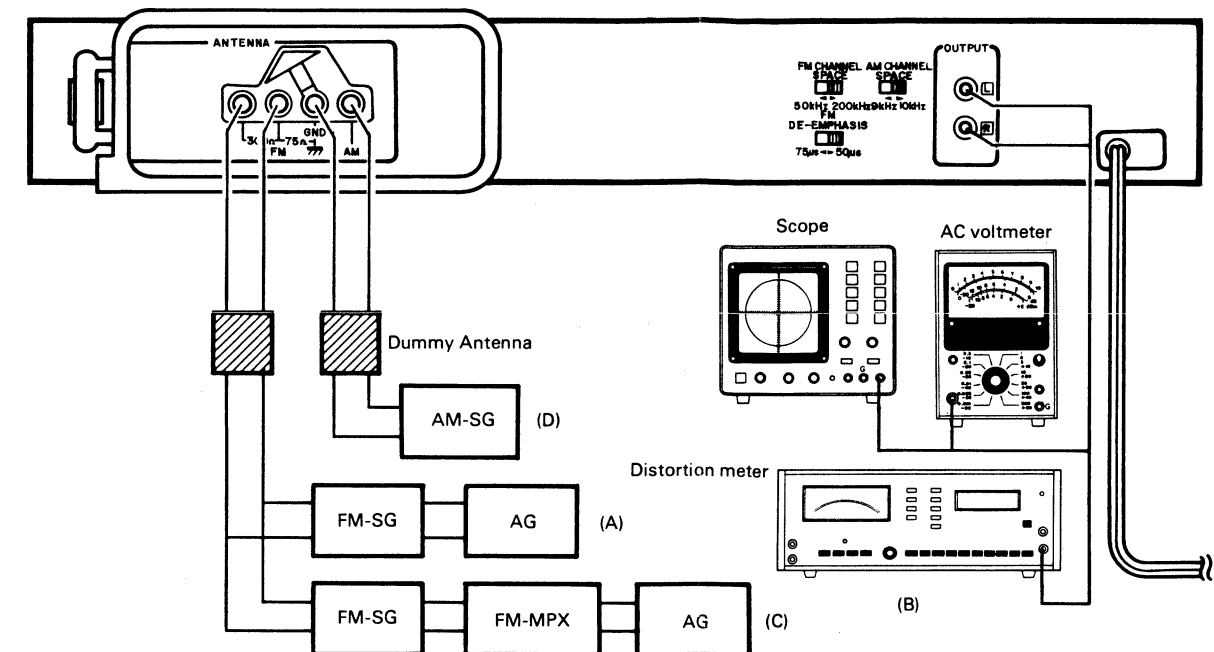


### REMOVAL OF SUBPANEL

1. Remove the front panel.
2. Remove 2 push rivets.
3. Pull the sub panel frontward.



## ADJUSTMENT/REGLAGES/ABGLEICH



## ADJUSTMENT

## ADJUSTMENT

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	TUNER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
<b>FM SECTION</b> Unless otherwise specified, the individual switches should be set as follows: SELECTOR: FM FM MODE: AUTO							
1	BAND EDGE	—	Connect a DC voltmeter to TP40.	87.9 MHz (87.50 MHz)	L4	3.0V	(a)
2	BAND EDGE	—	Connect a DC voltmeter to TP40.	107.9 MHz (108.00 MHz)	TC1	21.0V	(a)
Repeat alignments 1 and 2 several times.							
3	RF ALIGNMENT	(A) 98.1 MHz 1 kHz $\pm$ 75 kHz dev	(B)	MODE: MONO 98.1 MHz	L1, 2, 3	Maximum amplitude and symmetry of the oscilloscope display	
4	DISCRIMINATOR (1)	(A) 98.1 MHz 1 kHz $\pm$ 75 kHz dev 60 dB (ANT input)	Connect a DC voltmeter between TP9 and 10.	MODE: MONO 98.1 MHz	L7	0V	(b)
5	DISCRIMINATOR (2)	(A) 98.1 MHz 1 kHz $\pm$ 75 kHz dev 60 dB (ANT input)	(B)	MODE: MONO 98.1 MHz	L8	Minimum distortion	
Repeat alignments 4 and 5 several times.							
6	VCO	(A) 98.1 MHz 0 dev 60 dB (ANT input)	Connect a 330 k $\Omega$ resistor to TP11. Connect a frequency counter to the resistor via an AC voltmeter.	98.1 MHz	VR3	19.00 kHz	(c)
7	DISTORTION (STEREO)	(C) 98.1 MHz 1 kHz $\pm$ 68.25 kHz dev Selector: L or R Pilot: $\pm$ 6.75 kHz dev 60 dB (ANT input)	(B)	98.1 MHz	L5	Minimum distortion	
8	SEPARATION	(C) 98.1 MHz 1 kHz $\pm$ 68.25 kHz dev Selector: L or R Pilot: $\pm$ 6.75 kHz dev 60 dB (ANT input)	(B)	98.1 MHz	VR4	Minimum crosstalk. A compromise adjustment may be required if left-to-right and right-to-left separation are unequal.	
9	FM STOP LEVEL	(C) 98.1 MHz 1 kHz $\pm$ 68.25 kHz dev Selector: L or R Pilot: $\pm$ 6.75 kHz dev 30 dB (ANT input)	STEREO LED	98.1 MHz	VR1	Adjust VR1 so that STEREO LED goes off. Then, adjust VR1 and stop at the point where the LED goes on.	
<b>AM SECTION (KT-51)</b> Keep the AM loop antenna installed. SELECTOR: AM							
(1)	BAND EDGE	—	Connect a DC voltmeter to TP40.	1620 kHz (1611 kHz)	L10	21.0V	(a)
(2)	RF ALIGNMENT (1)	(D) 630 kHz 400 Hz, 30% mod	(B)	630 kHz	L9	Maximum amplitude and symmetry of the oscilloscope display.	
(3)	RF ALIGNMENT (2)	(D) 1440 kHz 400 Hz, 30% mod	(B)	1440 kHz	TC2	Maximum amplitude and symmetry of the oscilloscope display.	
Repeat alignments (2) and (3) several times.							
<b>AM-MW SECTION (KT-51L)</b> Keep the AM loop antenna installed. SELECTOR: MW							
(1)	BAND EDGE	—	Connect a DC voltmeter to TP40.	1620 kHz (1611 kHz)	L13	21.0V	(a)
(2)	RF ALIGNMENT (1)	(D) 630 kHz 400 Hz, 30% mod	(B)	630 kHz	L12	Maximum amplitude and symmetry of the oscilloscope display.	
(3)	RF ALIGNMENT (2)	(D) 1440 kHz 400 Hz, 30% mod	(B)	1440 kHz	TC4	Maximum amplitude and symmetry of the oscilloscope display.	
Repeat alignments (2) and (3) several times.							

## ADJUSTMENT/REGLAGES

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	TUNER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
<b>AM-LW SECTION (KT-51L)</b> Keep the AM loop antenna installed. SELECTOR: LW							
(4)	BAND EDGE	—	Connect a DC voltmeter to TP40.	353 kHz	L14	21.0V	(a)
(5)	RF ALIGNMENT (1)	(D) 173 kHz 400 Hz, 30% mod	(B)	173 kHz	T1 AM ferrite bar antenna	Maximum amplitude and symmetry of the oscilloscope display.	
(6)	RF ALIGNMENT (2)	(D) 326 kHz 400 Hz, 30% mod	(B)	326 kHz	TC3	Maximum amplitude and symmetry of the oscilloscope display	
Repeat alignments (5) and (6) several times.							

## REGLAGES

N°	ITEM	REGLAGE DE L'ENTREE	REGLAGE DE LA SORTIE	REGLAGE DU TUNER	POINTS DE L'ALIGNEMENT	ALIGNER POUR	FIG.
<b>SECTION MF</b> Sauf en cas d'indications spéciales, régler chaque commutateur comme suit: SELECTOR: FM FM MODE: AUTO							
1	BORD DE BANDE	—	Connecter un voltmètre CC au TP40.	87,9 MHz (87,50 MHz)	L4	3,0V	(a)
2	BORD DE BANDE	—	Connecter un voltmètre CC au TP40.	107,9 MHz (108,00 MHz)	TC1	21,0V	(a)
Répéter les points 1 et 2 plusieurs fois.							
3	RF ALIGNEMENT	(A) 98,1 MHz 1 kHz $\pm$ 75 kHz dév	(B)	MODE: MONO 98,1 MHz	L1, 2, 3	Amplitude et symétrie maximale de l'affichage de l'oscilloscope.	
4	DISCRIMINATEUR (1)	(A) 98,1 MHz 1 kHz $\pm$ 75 kHz dév 60 dB (Entrée ANT)	Connecter un voltmètre CC entre les TP9 et TP10.	MODE: MONO 98,1 MHz	L7	0V	(b)
5	DISCRIMINATEUR (2)	(A) 98,1 MHz 1 kHz $\pm$ 75 kHz dév 60 dB (Entrée ANT)	(B)	MODE: MONO 98,1 MHz	L8	Distorsion minimale	
Répéter les points 1 et 2 plusieurs fois.							
6	OSCILLATEUR CONTROLE PAR LA TENSION	(A) 98,1 MHz 0 dév 60 dB (Entrée ANT)	Connecter une résistance de 330 k $\Omega$ à TP11. Connecter un compteur de fréquence à une résistance par l'intermédiaire d'un voltmètre CA.	98,1 MHz	VR3	19,00 kHz	(c)
7	DISTORSION (STEREO)	(C) 98,1 MHz 1 kHz $\pm$ 68,25 kHz dév Selection: L ou R Signal pilote: $\pm$ 6,75 kHz dév 60 dB (Entrée ANT)	(B)	98,1 MHz	L5	Distorsion minimale	
8	SEPARATION	(C) 98,1 MHz 1 kHz $\pm$ 68,25 kHz dév Selection: L ou R Signal pilote: $\pm$ 6,75 kHz dév 60 dB (Entrée ANT)	(B)	98,1 MHz	VR4	Diaphonie minimale. Un compromis de réglage peut être nécessaire si les séparations de gauche à droite et de droit à gauche sont inégales.	
9	MF NEVEAU D'ARRET	(C) 98,1 MHz 1 kHz $\pm$ 68,25 kHz dév Selection: L ou R Signal pilote: $\pm$ 6,75 kHz dév 30 dB (Entrée ANT)	STEREO LED	98,1 MHz	VR1	Ajuster VR1 que STEREO LED est non allumé. Alors, ajuster VR1 et arrêter le mouvement de VR1 au moment où le STEREO LED s'allume.	

REGLAGES/ABGLEICH

N°	ITEM	REGLAGE DE L'ENTREE	REGLAGE DE LA SORTIE	REGLAGE DU TUNER	POINTS DE L'ALIGNEMENT	ALIGNER POUR	FIG.
SECTION MA (KT-51) Laisser l'antenne bouche MA installée. SELECTOR: AM							
(1)	BORD DE BANDE	–	Connecter un voltmètre CC au TP40.	1620 kHz (1611 kHz)	L10	21,0V	(a)
(2)	ALIGNEMENT H.T. (1)	(D) 630 kHz 400 Hz, 30% mod	(B)	630 kHz	L9	Amplitude et symétrie maximale de l'affichage de l'oscilloscope.	
(3)	ALIGNEMENT H.T. (2)	(D) 1440 kHz 400 Hz, 30% mod	(B)	1440 kHz	TC2	Amplitude et symétrie maximale de l'affichage de l'oscilloscope.	
Répéter les points (2) et (3) plusieurs fois.							
SECTION MA-OM (KT-51L) Laisser l'antenne bouche MA installée. SELECTOR: MW							
(1)	BORDE DE BANDE	–	Connecter un voltmètre CC au TP40.	1620 kHz (1611 kHz)	L13	21,0V	(a)
(2)	ALIGNEMENT H.T. (1)	(D) 630 kHz 400 Hz, 30% mod	(B)	630 kHz	L12	Amplitude et symétrie maximale de l'affichage de l'oscilloscope.	
(3)	ALIGNEMENT H.T. (2)	(D) 1440 kHz 400 Hz, 30% mod	(B)	1440 kHz	TC4	Amplitude et symétrie maximale de l'affichage de l'oscilloscope.	
Répéter les points (2) et (3) plusieurs fois.							
SECTION SECTION MA-OL (KT-51L) Laisser l'antenne bouche MA installée SELECTOR: LW							
(4)	BORD DE BANDE	–	Connecter un voltmètre CC au TP40.	353 kHz	L14	21,0V	(a)
(5)	ALIGNEMENT H.T. (1)	(D) 173 kHz 400 Hz, 30% mod	(B)	173 kHz	T1 Antenne MA	Amplitude et symétrie maximale de l'affichage de l'oscilloscope.	
(6)	ALIGNEMENT H.T. (2)	(D) 326 kHz 400 kHz, 30% mod	(B)	326 kHz	TC3	Amplitude et symétrie maximale de l'affichage de l'oscilloscope.	
Répéter les points (5) et (6) plusieurs fois.							

ABGLEICH

NR.	GEGENSTAND	EINGANGS-EINSTELLUNG	AUSGANGS-EINSTELLUNG	TUNER-EINSTELLUNG	ABGLEICH-PUNKTE	ABGLEICHEN FÜR	ABB.
UKW-EMPfangSABTEILUNG Außer wenn anders angegeben, die verschiedenen Schalter wie folgt einstellen: SELECTOR: FM FM MODE: AUTO							
1	BANDKANTE	–	Einen Gleichspannungsmesser zu TP40 anschließen.	87,9 MHz (87,50 MHz)	L4	3,0V	(a)
2	BANDKANTE	–	Einen Gleichspannungsmesser zu TP40 anschließen.	107,9 MHz (108,00 MHz)	TC1	21,0V	(a)
Abstimmungen 1 und 2 mehrere Male wiederholen.							
3	EMPfangS-BEREICH-ABSTIMMUNGEN	(A) 98,1 MHz 1 kHz ± 75 Hz Hub	(B)	MODE: MONO 98,1 MHz	L1, 2, 3	Maximal Amplitude und Symmetrie des Oszilloskopbildes.	
4	DISKRIMINATOR (1)	(A) 98,1 MHz 1 kHz ± 75 kHz Hub 60 dB (ANT-Eingang)	Einen Gleichspannungsmesser zwischen TP9 und TP10 anschließen.	MODE: MONO 98,1 MHz	L7	0V	(b)
5	DISKRIMINATOR (2)	(A) 98,1 MHz 1 kHz ± 75 kHz Hub 60 dB (ANT-Eingang)	(B)	MODE: MONO 98,1 MHz	L8	Minimalen Klirrfaktor	
Abstimmungen 4 und 5 mehrere Male wiederholen.							

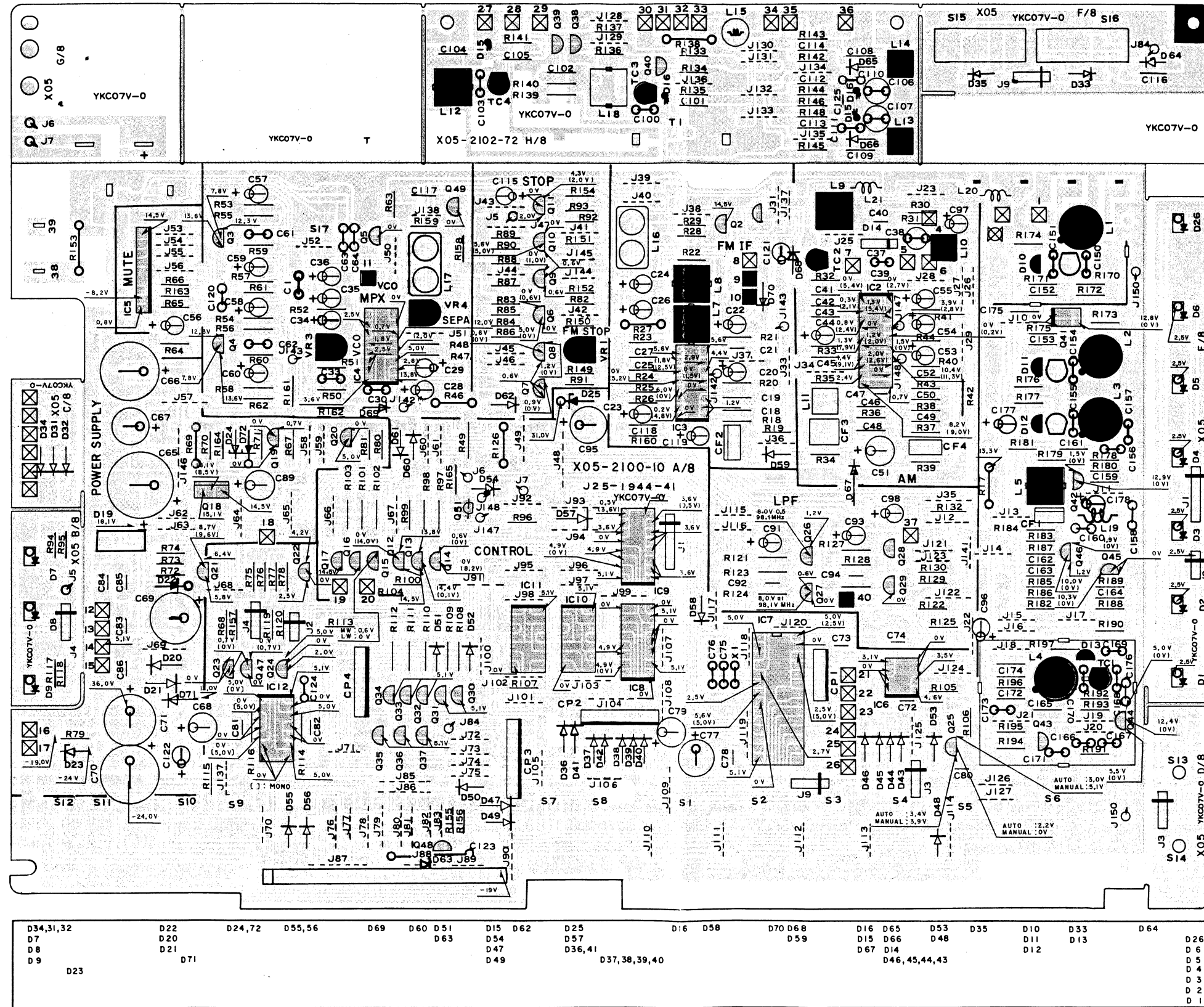
ABGLEICH

NR.	GEGENSTAND	EINGANGS-EINSTELLUNG	AUSGANGS-EINSTELLUNG	TUNER-EINSTELLUNG	ABGLEICH-PUNKTE	ABGLEICHEN FÜR	ABB.
6	SPANNUNGS-GEREGELTER OSZILLATOR	(A) 98,1 MHz 0 Hub 60 dB (ANT-Eingang)	Einen 330 kΩ Widerstand zu TP11 anschließen. Einen Frequenzzähler über einen Wechselspannungsmesser an den Widerstand anschließen.	98,1 MHz	VR3	19,00 kHz	(c)
7	KLIRRFAKTOR (STEREO)	(C) 98,1 MHz 1 kHz ± 68,25 kHz Hub Wähler: L oder R Pilotton: ± 6,75 kHz Hub 60 dB (ANT-Eingang)	(B)	98,1 MHz	L5	Minimalen Klirrfaktor	
8	STERO KANAL TRENNUNG	(C) 98,1 MHz 1 kHz ± 68,25 kHz Hub Wähler: L oder R Pilotton: ± 6,75 kHz Hub 60 dB (ANT-Eingang)	(B)	98,1 MHz	VR4	Minimales Übersprechen. Eine Ausgleichregelung darf notwendig sein, wenn links-zu-rechts und rechts-zu-links Kanal Trennungen ungleich sind.	
9	UKW HALT PEGEL	(C) 98,1 MHz 1 kHz ± 68,25 kHz Hub Wähler: L oder R Pilotton: ± 6,75 kHz Hub 30 dB (ANT-Eingang)	STEREO LED	98,1 MHz	VR1	Den Pegel widerstand VR1 so einstellen, daß der STEREO LED anzeiger nicht leuchtet. Dann der Pegelwiderstand VR1 aufdrehen, und dem VR1 Halt geben wobei den STEREO LED anzeiger leuchtet wird.	
MW-EMPfangSABTEILUNG (KT-51) Die MW-Rahmenantenne angebracht lassen. SELECTOR: AM							
(1)	BANDKANTE	–	Einen Gleichspannungsmesser zu TP40 anschließen.	1620 kHz (1611 kHz)	L10	21,0V	(a)
(2)	HF-ABGLEICH (1)	(D) 630 kHz 400 Hz, 30% mod	(B)	630 kHz	L9	Maximale Amplitude und Symmetrie des Oszilloskopbildes.	
(3)	HF-ABGLEICH (2)	(D) 1440 kHz 400 Hz, 30% mod	(B)	1440 kHz	TC2	Maximale Amplitude und Symmetrie des Oszilloskopbildes.	
Abstimmungen (2) und (3) mehrere Male wiederholen.							
MW-EMPfangSABTEILUNG (KT-51L) Die MW-Rahmenantenne angebracht lassen. SELECTOR: MW							
(1)	BANDKANTE	–	Einen Gleichspannungsmesser zu TP40 anschließen.	1620 kHz (1611 kHz)	L13	21,0V	(a)
(2)	HF-ABGLEICH (1)	(D) 630 kHz 400 Hz, 30% mod	(B)	630 kHz	L12	Maximale Amplitude und Symmetrie des Oszilloskopbildes.	
(3)	HF-ABGLEICH (2)	(D) 1440 kHz 400 Hz, 30% mod	(B)	1440 kHz	TC2	Maximale Amplitude und Symmetrie des Oszilloskopbildes.	
Abstimmungen (2) und (3) mehrere Male wiederholen.							
LW-EMPfangSABTEILUNG (KT-51L) Die MW-Rahmenantenne angebracht lassen. SELECTOR: LW							
(4)	BANDKANTE	–	Einen Gleichspannungsmesser zu TP40 anschließen.	353 kHz	L14	21,0V	(a)
(5)	FH-ABGLEICH (1)	(D) 173 kHz 400 Hz, 30% mod	(B)	173 kHz	T1 MW-Ferritantenne	Maximale Amplitude und Symmetrie des Oszilloskopbildes.	
(6)	HF-ABGLEICH (2)	(D) 326 kHz 400 Hz, 30% mod	(B)	326 kHz	TC3	Maximale Amplitude und Symmetrie des Oszilloskopbildes.	
Abstimmungen (5) und (6) mehrere Male wiederholen.							

# KT-51/B KT-51/B

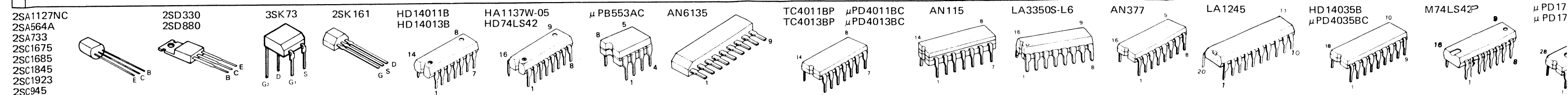
## PC BOARD

TUNER (X05-2100-11) Component side view



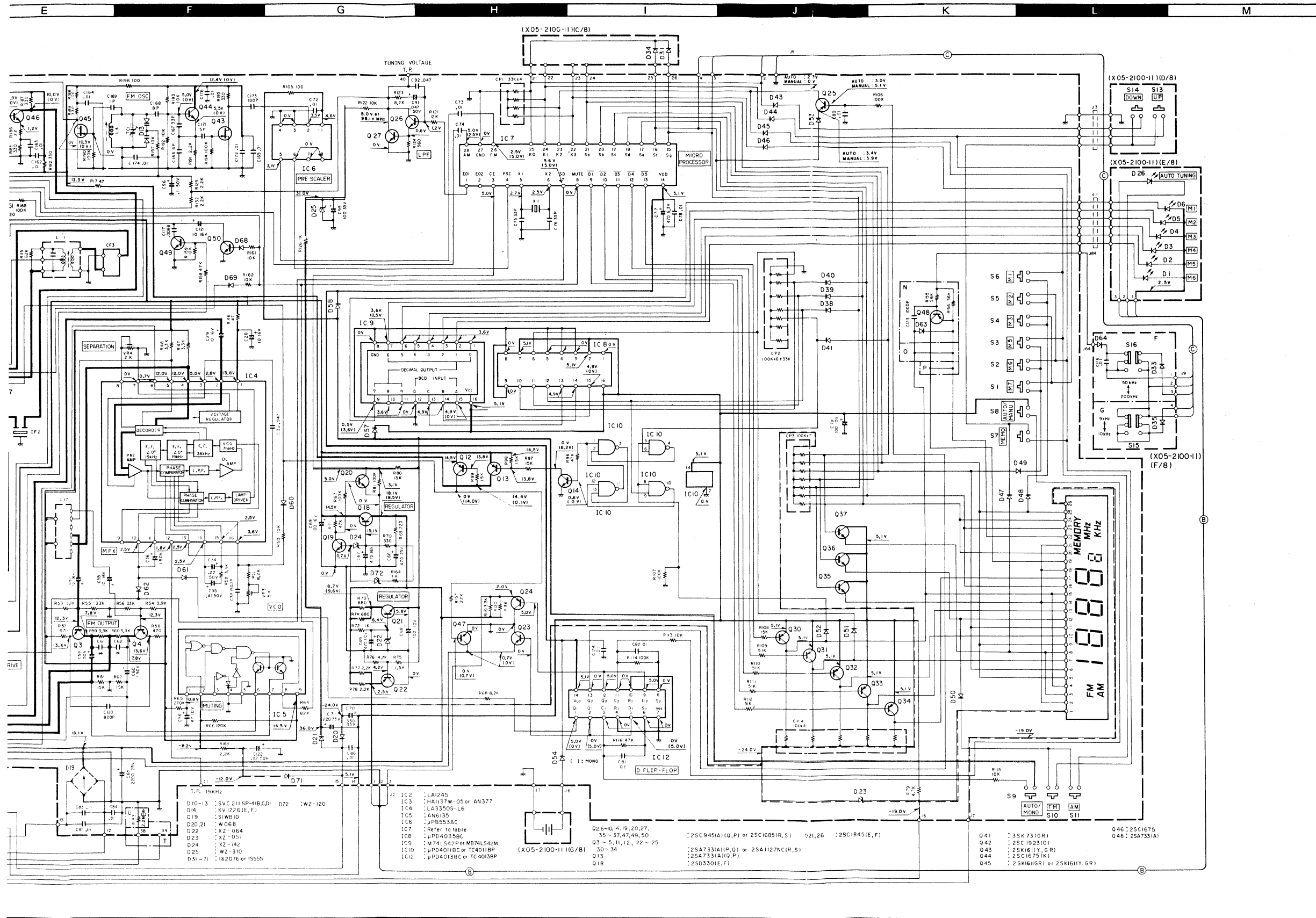
Refer to the schematic diagram for the values of resistors and capacitors.  
The PC board drawing is viewing from the side easy to check.





# QUARTZ SYNTHESIZER STEREO TUNER

# KT-51



## SPECIFICATIONS

### FM tuner section

Usable Sensitivity	10.8 dBf (0.95 $\mu$ V)
50 dB Quieting Sensitivity	
Mono	16.4 dBf (3.6 $\mu$ V)
Stereo	37.2 dBf (40 $\mu$ V)
Signal to Noise Ratio at 65 dBf	
Mono	72 dB
Stereo	68 dB
Total Harmonic Distortion at 1 kHz	
Mono	0.1%
Stereo	0.15%
Frequency Response	30 Hz to 15 kHz +0.2 dB, -2.0 dB
Capture Ratio	1 dB
Image Rejection Ratio	80 dB
Spurious Rejection Ratio	90 dB
IF Rejection Ratio	90 dB
Alternate Channel Selectivity	50 dB
AM Suppression Ratio	47 dB
Stereo Separation Ratio	45 dB at 1 kHz
	32 dB at 50 Hz to 10 kHz
Antenna Impedance	300 ohms balanced and 75 ohms unbalanced
Output Level at 1 kHz, 100% Mod	0.6V/3.3 kohms

### AM tuner section

Usable Sensitivity	10 $\mu$ V
Signal to Noise Ratio	50 dB
Total Harmonic Distortion	0.5%
Image Rejection	30 dB
Output Level	0.17V/3.3 kohms

### General

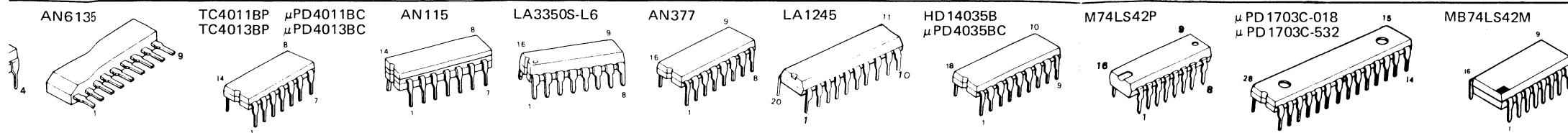
Power Requirements	60 Hz 120V (U.S.A and Canada) or 50/60 Hz 120/220-240V, Switchable
Power Consumption	0.1A (UL and CSA) 10W
Dimensions	W: 440 mm (17-5/16") H: 74 mm (2-29/32") D: 235 mm (9-1/4")
Weight (Net)	2.5 kg (5.5 lb)

Kenwood follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

Kenwood poursuit une politique de progrès constants en ce qui concerne le développement. Pour cette raison, les spécifications sont sujettes à modifications sans préavis.

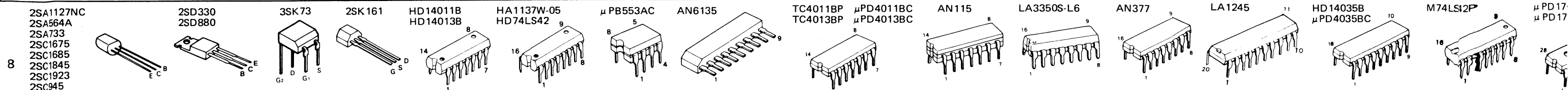
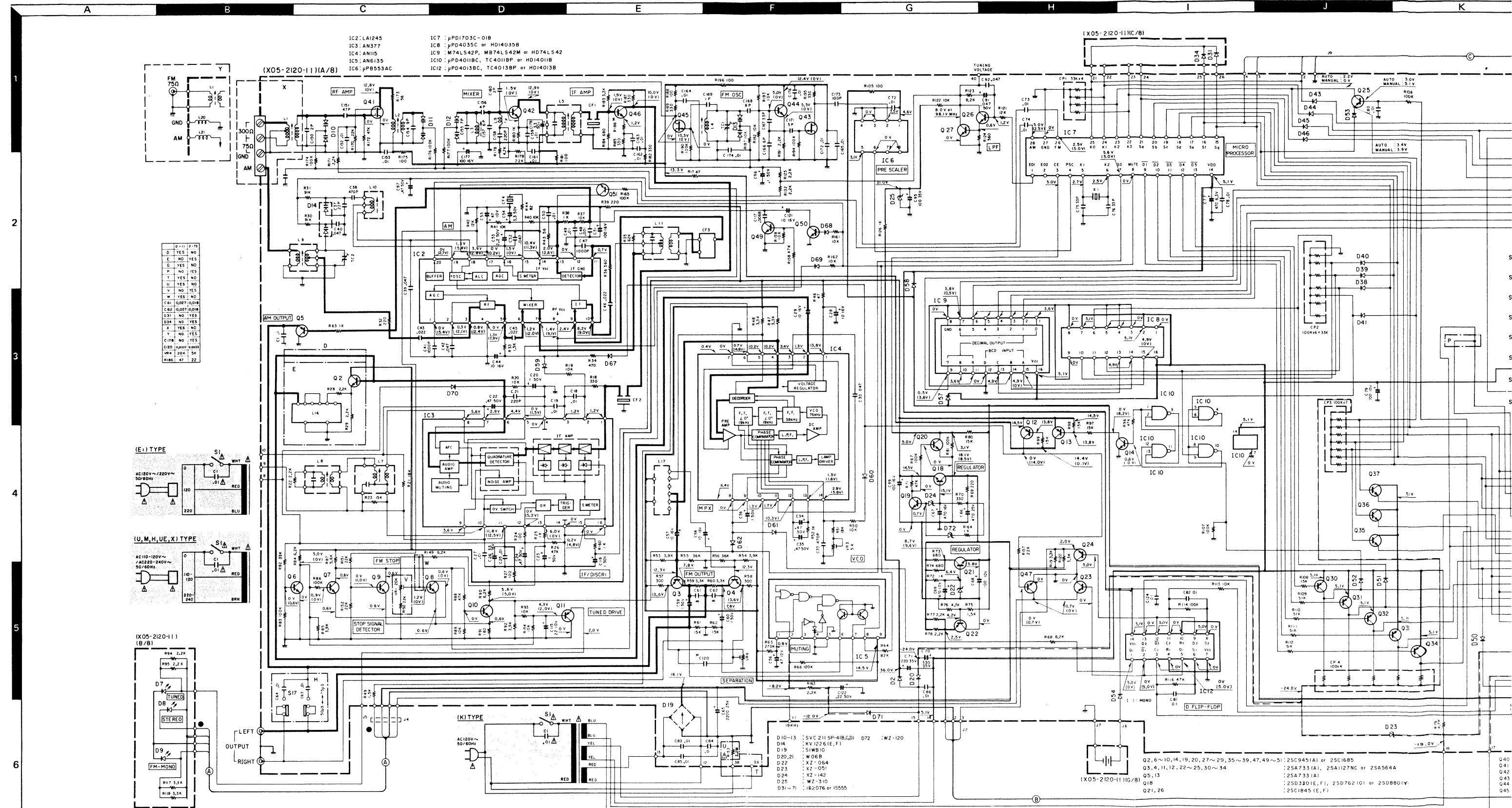
Kenwood strebt ständige Verbesserungen in der Entwicklung an. Daher bleiben Änderungen der technischen Daten jederzeit vorbehalten.

**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). Indicates safety critical components. To reduce the risk of electric shock, leakage current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.



DC voltages are as measured with a high impedance voltmeter during reception of the FM broadcast signal (with a signal strength of 60 dB at the ANT terminal). Values may vary slightly due to variations between individual instruments or/and units. Values in parentheses are as measured during reception of the AM broadcast signal (with a signal strength of 60 dB at the ANT terminal).





# KT-51



### FM tuner section

<b>Usable Sensitivity</b> .....	10.8 dBf (0.95 $\mu$ V)
<b>50 dB Quieting Sensitivity</b>	
<b>Mono</b> .....	16.4 dBf (3.6 $\mu$ V)
<b>Stereo</b> .....	37.2 dBf (40 $\mu$ V)
<b>Signal to Noise Ratio at 65 dBf</b>	
<b>Mono</b> .....	72 dB
<b>Stereo</b> .....	68 dB
<b>Total Harmonic Distortion at 1 kHz</b>	
<b>Mono</b> .....	0.1%
<b>Stereo</b> .....	0.15%
<b>Frequency Response</b> .....	30 Hz to 15 kHz +0.2 dB, -2.0 dB
<b>Capture Ratio</b> .....	1 dB
<b>Image Rejection Ratio</b> .....	80 dB
<b>Spurious Rejection Ratio</b> .....	90 dB
<b>IF Rejection Ratio</b> .....	90 dB
<b>Alternate Channel Selectivity</b> .....	50 dB
<b>AM Suppression Ratio</b> .....	47 dB
<b>Stereo Separation Ratio</b> .....	45 dB at 1 kHz 32 dB at 50 Hz to 10 kHz
<b>Antenna Impedance</b> .....	300 ohms balanced and 75 ohms unbalanced
<b>Output Level at 1 kHz, 100% Mod</b> .....	0.6V/3.3 kohms

### AM tuner section

Usable Sensitivity.....	10 $\mu$ V
Signal to Noise Ratio.....	50 dB
Total Harmonic Distortion.....	0.5%
Image Rejection.....	30 dB
Output Level.....	0.17V/3.3 kohms

## General

**Power Requirements** ..... 60 Hz 120V (U.S.A. and Canada)  
or 50/60 Hz 120/220-240V,  
Switchable

**Power Consumption** ..... 0.1A (UL and CSA) 10W

**Dimensions** ..... W: 440 mm (17-5/16")  
H: 74 mm (2-29/32")  
D: 235 mm (9-1/4")


**Weight (Net)** ..... 2.5 kg (5.5 lb)

Kenwood follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

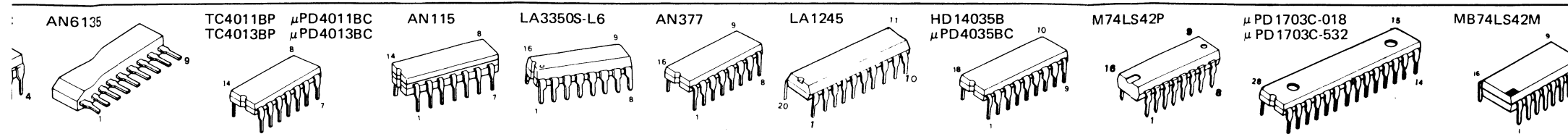
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**CAUTION:** For continued safety, replace safety critical com-

ponents only with manufacturer's recommended parts (refer to parts list).  Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

DC voltages are as measured with a high impedance voltmeter during reception of the FM broadcast signal (with a signal strength of 60 dB at the ANT terminal). Values may vary slightly due to variations between individual instruments or/and units. Values in parentheses are as measured during reception of the AM broadcast signal (with a signal strength of 60 dB at the ANT terminal).



## PARTS LIST

\* New Parts

Parts without Parts No. are not supplied.

Les articles non mentionnés dans le Parts No. ne sont pas fournis.

Teile ohne Parts No. werden nicht geliefert.

Refer to exploded view on page 17.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕向	Re- marks 備考
KT-51						
11	1A		A01-0403-14	METALLIC CABINET		
12	2A	*	A20-3486-03	PANEL ASSY		
13	2A	*	B10-0384-03	FRONT GLASS		
-			B46-0092-03	WARRANTY CARD	K	
-			B46-0093-03	WARRANTY CARD	P	
-			B46-0094-03	WARRANTY CARD	UHUE	
-			B46-0095-03	WARRANTY CARD	UHUE	
-			B46-0096-03	WARRANTY CARD	X	
-			B46-0098-03	WARRANTY CARD	E	
-			B46-0098-03	WARRANTY CARD	E	
-		*	B50-4694-00	INSTRUCTION MANUAL (ENGLISH)	KPUMH	
-		*	B50-4694-00	INSTRUCTION MANUAL (ENGLISH)	UEX	
-		*	B50-4695-00	INSTRUCTION MANUAL (FRENCH)	PMXE	
-		*	B50-4696-00	INSTRUCTION MANUAL (SPANISH)	M	
-		*	B50-4698-00	INSTRUCTION MANUAL	E	
-			B59-0092-00	SERVICE DIRECTORY	UHUE	
△ C1	2A		C91-0023-05	CERAMIC 0.01UF AC250V	UMHUE	
△ C1	2A		C91-0023-05	CERAMIC 0.01UF AC250V	X	
△ C1	2A		C91-0079-05	CERAMIC 0.01UF AC125V	KPE	
△ 14	2A		E03-0053-15	AC INLET	E	
△ 14	2A		E03-0102-15	AC INLET	UMHUE	
△ 14	2A		E03-0102-15	AC INLET	X	
△ 15	2A, 2B		E30-0181-05	AC POWER CORD	KP	
△ 15	2A, 2B		E30-1305-15	AC POWER CORD (INLET)	UMHUE	
△ 15	2A, 2B		E30-1329-05	AC POWER CORD (INLET)	E	
△ 15	2A, 2B		E30-1342-05	AC POWER CORD (INLET)	X	
16	1A		E30-0505-05	AUDIO CORD		
17	1A		E04-0006-05	RF COAXIAL CABLE RECEPTACLE	E	
-		*	H01-4742-04	ITEM CARTON CASE		J
-		*	H01-4743-04	ITEM CARTON CASE		S
-			H10-1595-03	POLYSTYRENE FOAMED FIXTURE		
-			H25-0078-04	PROTECTION BAG		
-			H25-0179-04	PROTECTION BAG		
20	3A, 3B		J02-0121-05	FOOT Ø23X8		
21	2B		J19-0626-12	ANTENNA HOLDER		
△ 22	2B		J42-0083-05	POWER CORD BUSHING	KP	
-			J61-0045-15	WIRE BAND	E	
23	2A		K29-1176-04	KNOB ASSY POWER		
24	2A	*	K27-0967-04	KNOB (BUTTON) PRESET		
25	2B		K27-0675-04	KNOB (BUTTON) MEMORY, MANU/AUTO		
26	2B		K27-0676-04	KNOB (BUTTON) AM, FM, FM MODE		
27	3A		K27-0966-04	KNOB (IN PANEL ASSY) TUNING		
△ 28	1A		L01-2491-05	POWER TRANSFORMER	KP	
△ 28	1A		L01-2494-05	POWER TRANSFORMER	UMHUE	
△ 28	1A		L01-2494-05	POWER TRANSFORMER	X	
△ 28	1A		L01-2497-05	POWER TRANSFORMER	E	
29	1A		N09-0287-05	SEMS(TAPTITE SCREW) TRANSFORMER		
30	2B		N09-0292-05	SCREW GND		
31	1A, 1B		N09-0377-05	TAPTITE SCREW CASE		
32	2B		N29-0033-05	PUSH RIVET Ø3X6.5		
33	1B, 2B		N29-0216-05	PUSH RIVET		

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## PARTS LIST

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Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕向	Re- marks 備考
S1	2A		S40-1067-05	PUSH SWITCH (POWER TYPE)		
35	2B		T90-0104-15	LOOP ANTENNA	E	
36	1A		T90-0122-05	ANTENNA ADAPTOR		
37	1A		T90-0202-05	FEEDER ANTENNA		
KT-51B						
11	1A	*	A01-0418-12	METALLIC CABINET	K P E KMP MPE M E	
12	2A	*	A20-3514-03	PANEL ASSY		
13	2A	*	B10-0384-03	FRONT GLASS		
-			B46-0092-03	WARRANTY CARD		
-			B46-0093-03	WARRANTY CARD		
-			B46-0098-03	WARRANTY CARD		
-		*	B50-4694-00	INSTRUCTION MANUAL (ENGLISH)		
-		*	B50-4695-00	INSTRUCTION MANUAL (FRENCH)		
-		*	B50-4696-00	INSTRUCTION MANUAL (SPANISH)		
-		*	B50-4698-00	INSTRUCTION MANUAL		
C1	2A		C91-0023-05	CERAMIC 0.01UF AC250V	M	KPE
C1	2A		C91-0079-05	CERAMIC 0.01UF AC125V		
14	2A		E03-0053-15	AC INLET	E	M KP M E
14	2A		E03-0102-15	AC INLET		
15	2A,2B		E30-0181-05	AC POWER CORD		
15	2A,2B		E30-1305-15	AC POWER CORD (INLET)		
15	2A,2B		E30-1329-05	AC POWER CORD (INLET)		
16	1A		E30-0505-05	AUDIO CORD	E	J S
17	1A		E04-0006-05	RF COAXIAL CABLE RECEPTACLE		
-		*	H01-4763-04	ITEM CARTON CASE		
-		*	H01-4764-04	ITEM CARTON CASE		
-			H10-1595-03	POLYSTYRENE FOAMED FIXTURE		
-			H25-0078-04	PROTECTION BAG	KP	
-			H25-0179-04	PROTECTION BAG		
20	3A,3B		J02-0121-05	FOOT Ø23X8		
21	2B		J19-0626-12	ANTENNA HOLDER		
22	2B		J42-0083-05	POWER CORD BUSHING		
23	2A		K29-1176-04	KNOB ASSY POWER	K P E KMP M E	
24	2A	*	K27-0967-04	KNOB (BUTTON) PRESET		
25	2B		K27-0675-04	KNOB (BUTTON) MEMORY,MANU/AUTO		
26	2B		K27-0676-04	KNOB (BUTTON) AM,FM,FM MODE		
27	3A	*	K27-0966-04	KNOB (IN PANEL ASSY) TUNING		
28	1A		L01-2491-05	POWER TRANSFORMER	K P E	
28	1A		L01-2494-05	POWER TRANSFORMER		
28	1A		L01-2497-05	POWER TRANSFORMER		
29	1A		N09-0287-05	SEMS(TAPTITE SCREW)TRANSFORMER	E	
30	2B		N09-0292-05	SCREW GND		
31	1A,1B		N89-3008-45	SCREW(BI-TAP) CASE		
32	2B		N29-0033-05	PUSH RIVET Ø3X6.5		
33	1B,2B		N29-0216-05	PUSH RIVET		
S1	2A		S40-1067-05	PUSH SWITCH (POWER TYPE)	E	
35	2B		T90-0104-15	LOOP ANTENNA		
36	1A		T90-0122-05	ANTENNA ADAPTOR		
37	1A		T90-0202-05	FEEDER ANTENNA		

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TUNER (X05-2100-11,X05-2120-11)						
D1 -6	2B, 2A		B30-0368-05	LED (PG5532KX) M1,2,3,4,5,6		
D7	2A	*	B30-0347-05	LED (PY5532K) TUNED		
D8	2A	*	B30-0348-05	LED (PR5532K) STEREO		
D9	2A	*	B30-0347-05	LED (PY5532K) FM-MONO		
D26		*	B30-0347-05	LED (PY5532K) AUTO-TUNING		
C1			CQ93FM1H104K	MYLAR 0.1UF K		
C18 ,19			C91-0083-05	CERAMIC 0.01UF N		
C21			CC45FSL1H221J	CERAMIC 220PF J		
C25			C91-0083-05	CERAMIC 0.01UF N		
C27			C91-0083-05	CERAMIC 0.01UF N		
C30			CQ93M1H473J	MYLAR 0.047UF J		
C33			CQ09FS1H152J	POLYSTY 1500PF J		A
C33			CQ09FS1H471J	POLYSTY 470PF J		B
C37			CC45UJ1H220J	CERAMIC 22PF J		
C38			CQ09FS1H471J	POLYSTY 470PF J		
C39 ,40			CK45FF1H473Z	CERAMIC 0.047UF Z		
C41			CK14D1H102M	CERAMIC 1000PF M		
C42			CK45F1H473Z	CERAMIC 0.047UF Z		B
C42 ,43			C91-0085-05	CERAMIC 0.022UF N		A
C43			CK45F1H223Z	CERAMIC 0.022UF Z		B
C45 ,46			C91-0085-05	CERAMIC 0.022UF N		
C47			CK45FB1H102K	CERAMIC 0.001UF K		
C48			CK14D1H102M	CERAMIC 1000PF M		
C49 ,50			C91-0083-05	CERAMIC 0.01UF N		B
C52			CK45F1H473Z	CERAMIC 0.047UF Z		
C52			C91-0085-05	CERAMIC 0.022UF N		A
C61 ,62			CQ93M1H183J	MYLAR 0.018UF J	UMHUE	
C61 ,62			CQ93M1H183J	MYLAR 0.018UF J	XE	
C61 ,62			CQ93M1H273J	MYLAR 0.027UF J	KP	
C63 ,64			CQ93M1H103J	MYLAR 0.01UF J	UMHUE	
C72 -74			CK45FF1H103Z	CERAMIC 0.01UF Z		
C75 ,76			CC45CH1H330J	CERAMIC 33PF J		
C78			CK45FF1H103Z	CERAMIC 0.01UF Z		
C80 -86			CK45FF1H103Z	CERAMIC 0.01UF Z		
C91			CE04GW1HR47M	LL-ELEC 0.47UF 50WV		
C92			CQ93FM1H473K	MYLAR 0.047UF K		
C96			CE04GW1HOR1M	LL-ELEC 0.1UF 50WV		
C97			CE04GW1HR47M	LL-ELEC 0.47UF 50WV		
C116			C91-0083-05	CERAMIC 0.01UF N	UMHUE	
C117			CQ93M1H682K	MYLAR 0.0068UF K		
C120			CK45B1H821K	CERAMIC 820PF K		A
C120			CQ92M1H222K	MYLAR 0.0022UF K	KP	B
C120			CQ92M1H332K	MYLAR 0.0033UF K	E	B
C123			CK45B1H102K	CERAMIC 0.001UF K	UMHUE	
C124			CK45F1H103Z	CERAMIC 0.01UF Z		
C150			CC45SL1H020C	CERAMIC 2PF C		
C151			CC45SL1H470J	CERAMIC 47PF J		
C152 ,153			C91-0083-05	CERAMIC 0.01UF N		
C154			CC45SL1H090D	CERAMIC 9PF D		
C155			CC45SL1H070D	CERAMIC 7PF D		
C156			CC45SL1H040C	CERAMIC 4PF C		
C157			CC45SL1H060D	CERAMIC 6PF D		
C158			CC45SL1H221J	CERAMIC 220PF J		

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A: X05-210 \* - \* \*

B: X05-212 \* - \* \*

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C159			C91-0083-05	CERAMIC 0.01UF N		
C160			CC45SL1H020C	CERAMIC 2PF C		
C161-165			C91-0083-05	CERAMIC 0.01UF N		
C166			CC45CH1H060D	CERAMIC 6PF D		
C167			CC45CH1H330J	CERAMIC 33PF J		
C168			CC45UJ1H080D	CERAMIC 8PF D		
C169		*	CC45CH1H010C	CERAMIC 1PF C		A
C169			CC45CH1H330J	CERAMIC 33PF J		B
C171			CC45CH1H050C	CERAMIC 5PF C		
C172			C91-0083-05	CERAMIC 0.01UF N		
C173			CC45SL1H101J	CERAMIC 100PF J		
C174, 175			C91-0083-05	CERAMIC 0.01UF N		
C176			CK45F1H103Z	CERAMIC 0.01UF Z		
TC1			C05-0302-05	CERAMIC TRIM CAP. 11PF		
TC2			C05-0303-05	CERAMIC TRIM CAP. 20PF		
100	1B	*	E13-0217-05	PHONE JACK 2P		
101	1B	*	E20-0232-05	ANTENNA TERMINAL BOARD	E	
101	1B		E20-0439-05	ANTENNA TERMINAL BOARD	KPUMH	
101	1B		E20-0439-05	ANTENNA TERMINAL BOARD	UEX	
CF1		*	L72-0190-05	CERAMIC FILTER	E	
CF1 ,2		*	L72-0140-05	CERAMIC FILTER	KPUMH	
CF1 ,2		*	L72-0140-05	CERAMIC FILTER	UEX	
CF2		*	L72-0195-05	CERAMIC FILTER	E	
CF3			L72-0097-05	CERAMIC FILTER		
CF4			L72-0096-05	CERAMIC FILTER		
L1		*	L31-0475-05	FM-RF COIL	KPUMH	
L1		*	L31-0475-05	FM-RF COIL	UEX	
L1		*	L31-0481-05	FM-RF COIL	E	
L2 ,3		*	L31-0476-05	FM-RF COIL		
L4		*	L32-0270-05	FM OSCILLATING COIL		
L5			L30-0326-05	FM IFT		
L7			L30-0316-05	FM IFT		
L8			L30-0317-05	FM IFT		
L9		*	L31-0474-05	MW-RF COIL		
L10		*	L32-0271-05	MW OSCILLATING COIL		
L11			L30-0337-05	AM IFT		
L16			L79-0125-05	LC FILTER	E	
L17			L79-0140-05	LC FILTER		
L19			L40-1092-11	FIXED INDUCTOR 1.0UH M		
L20 ,21			L40-1092-11	FIXED INDUCTOR 1.0UH M	E	
X1			L77-0573-05	CRYSTAL RESONATOR 4.5MHZ		
CP1			R90-0140-05	MULTI-COMP 33K X4		
CP2		*	R90-0184-05	MULTI-COMP		
CP3			R90-0132-05	MULTI-COMP 100K X7		
CP4		*	R90-0183-05	MULTI-COMP 100K X5		
R17			RD14GB2E470J	FL-PROOF RD 47 J 2E		
R27			RD14GB2E101J	FL-PROOF RD 100 J 2E		
R46			RD14GB2E470J	FL-PROOF RD 47 J 2E		
R69		*	RD14GB2E221J	FL-PROOF RD 220 J 2E		
R126		*	RD14GB2E102J	FL-PROOF RD 1K J 2E		
R153			R92-0173-05	RC 2.2M M 2H	KP	
VR1			R12-3313-05	TRIMMING P8T 20K (FM STOP)	E	
VR3			R12-2305-05	TRIMMING P8T 5K (VCO)		
VR4			R12-1313-05	TRIMMING P8T 2K (SEPARATION)		A

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VR4 VR4			R12-2305-05 R12-3313-05	TRIMMING P0T 5K (SEPARATION) TRIMMING P0T 20K (SEPARATION)	KP E	B B
S1 -11 S13 ,14 S15 S15 S16	2B 2B 3A 3A 3B	* *   	S40-1052-05 S40-1054-05 S31-2056-05 S31-2056-05 S31-2056-05	PUSH SWITCH (SELECTOR, MEMORY) PUSH SWITCH (TUNING UP, DOWN) SLIDE SWITCH (AM CHANNEL SPACE) SLIDE SWITCH (AM CHANNEL SPACE) SLIDE SWITCH (FM CHANNEL SPACE)	KPUMH UE UMHUE	
S17	1B	*	S31-2069-05	SLIDE SWITCH (DE-EMPHASIS)	UMHUE	
102 D10 -13 D14 D19 D20 ,21	2B	*	FIP7D8 SVC211SP-4 (BCD) KV1226 (EF) S1WB10 W06B	FLUORESCENT INDICATOR TUBE VARIABLE CAPACITANCE DIODE VARIABLE CAPACITANCE DIODE DIODE DIODE		
D22 D23 D23 D24 D25			XZ-064 WZ-051 XZ-051 XZ-142 WZ-310	ZENER DIODE ZENER DIODE ZENER DIODE ZENER DIODE ZENER DIODE		B A
D31 D31 D33 D33 D34			1S1555 1S2076 1S1555 1S2076 1S1555	DIODE DIODE DIODE DIODE DIODE	XE XE UMHUE UMHUE XE	
D34 D35 D35 D35 D35			1S2076 1S1555 1S1555 1S2076 1S2076	DIODE DIODE DIODE DIODE DIODE	XE KPUMH UE KPUMH UE	
D38 -41 D38 -41 D43 -54 D43 -54 D57 -62			1S1555 1S2076 1S1555 1S2076 1S1555	DIODE DIODE DIODE DIODE DIODE		
D57 -62 D63 ,64 D63 ,64 D67 -71 D67 -71			1S2076 1S1555 1S2076 1S1555 1S2076	DIODE DIODE DIODE DIODE DIODE	UMHUE UMHUE	
D72 IC2 IC3 IC3 IC4			WZ-120 LA1245 AN377 HA1137W-05 AN115	ZENER DIODE IC (AM) IC (FM-IF, DET) IC (FM-IF, DET) IC (MPX)		
IC4 IC5 IC6 IC7 IC7			LA3350S-L6 AN6135 UPB553AC UPD1703C-018 UPD1703C-532	IC (MPX) IC (MUTING) IC (PRE SCALER) IC (MICROPROCESSOR) IC (MICROPROCESSOR)	KPXE UMHUE	
IC8 IC8 IC9 IC9 IC9			HD14035B UPD4035BC HD74LS42 MB74LS42M M74LS42P	IC (4-STAGE SHIFT RESISTER) IC (4-STAGE SHIFT RESISTER) IC (BCD-T0-DECIMAL DECODER) IC (BCD-T0-DECIMAL DECODER) IC (BCD-T0-DECIMAL DECODER)		

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IC10 IC10 IC10 IC12 IC12			HD14011B TC4011BP UPD4011BC HD14013B TC4013BP	IC (QUAD 2-INPUT NAND GATE) IC (QUAD 2-INPUT NAND GATE) IC (QUAD 2-INPUT NAND GATE) IC (DUAL D FLIP-FL0P) IC (DUAL D FLIP-FL0P)		
IC12 Q2 Q2 Q3 -5 Q3 -5			UPD4013BC 2SC1685 (R, S) 2SC945 (A) (Q, P) 2SA1127NC (R, S) 2SA733 (A) (Q, P)	IC (DUAL D FLIP-FL0P) TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR	E E	
Q6 -10 Q6 -10 Q11 -13 Q11 ,12 Q11 ,12			2SC1685 (R, S) 2SC945 (A) (Q, P) 2SA733 (A) (Q, P) 2SA1127NC (R, S) 2SA564A	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		
Q14 Q14 Q18 Q18 Q19 ,20			2SC1685 (R, S) 2SC945 (A) (Q, P) 2SD330 (E, F) 2SD880 (Y) 2SC1685 (R, S)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		
Q19 ,20 Q21 Q22 -25 Q22 -25 Q22 -25			2SC945 (A) (Q, P) 2SC1845 (F, E) 2SA1127NC (R, S) 2SA564A 2SA733 (A) (Q, P)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		
Q26 Q27 Q27 Q30 -34 Q30 -34			2SC1845 (F, E) 2SC1685 (R, S) 2SC945 (A) (Q, P) 2SA1127NC (R, S) 2SA564A	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		
Q30 -34 Q35 -37 Q35 -37 Q41 Q42			2SA733 (A) (Q, P) 2SC1685 (R, S) 2SC945 (A) (Q, P) 3SK73 (GR) 2SC1923 (Q)	TRANSISTOR TRANSISTOR TRANSISTOR FET TRANSISTOR		
Q43 Q44 Q45 Q45 Q46		*	2SK161 (Y, GR) 2SC1675 (K) 2SK161 (GR) 2SK161 (Y, GR) 2SC1675	FET TRANSISTOR FET FET TRANSISTOR		
Q47 Q47 Q48 Q48 Q49 -51			2SC1685 (R, S) 2SC945 (A) (Q, P) 2SA1127NC 2SA733 (A) 2SC1685 (R, S)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR	UMHUE UMHUE	
Q49 -51			2SC945 (A) (Q, P)	TRANSISTOR		

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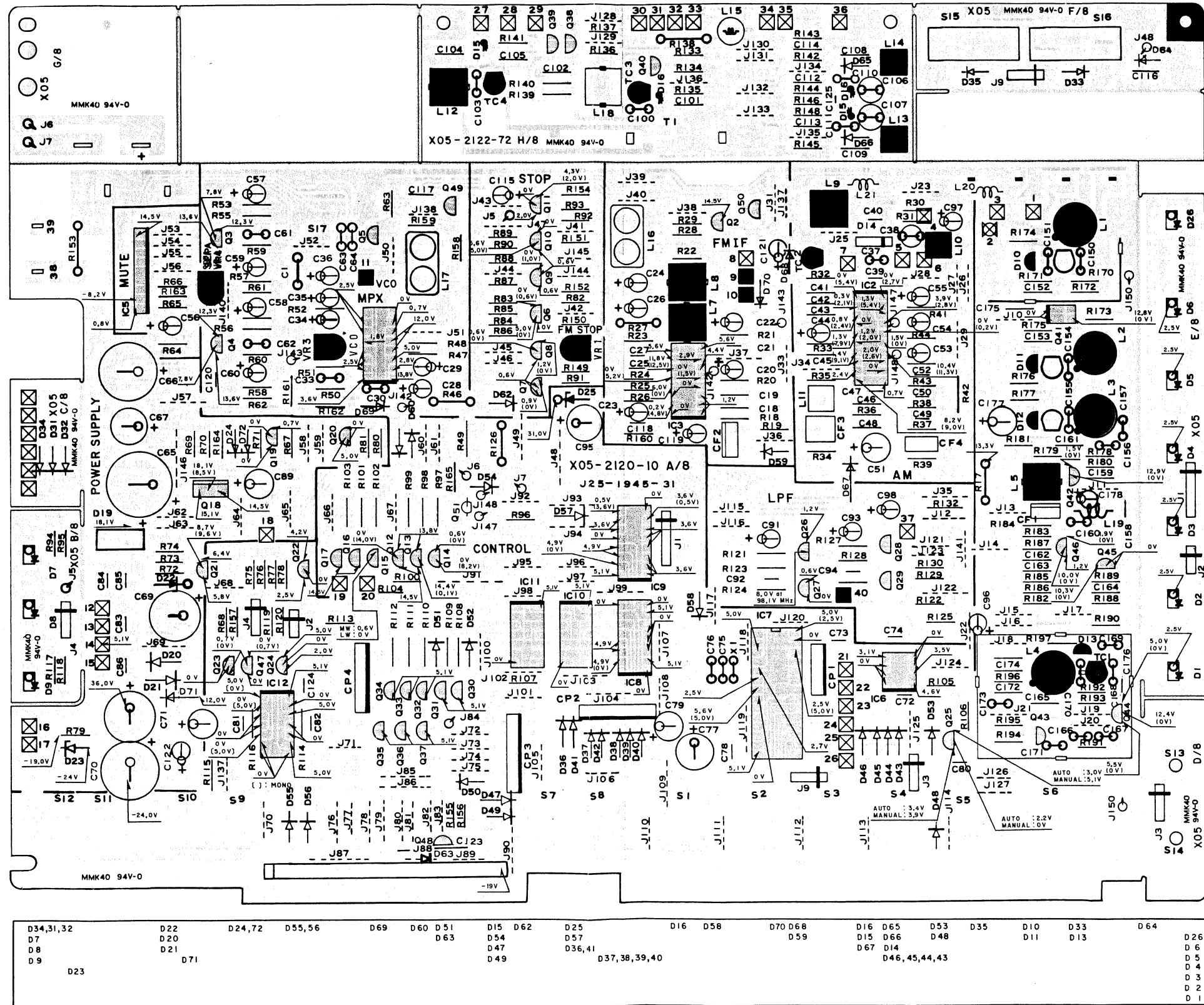
A: X05-210 \* - \* \*

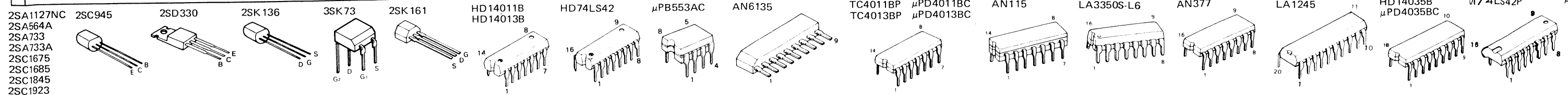
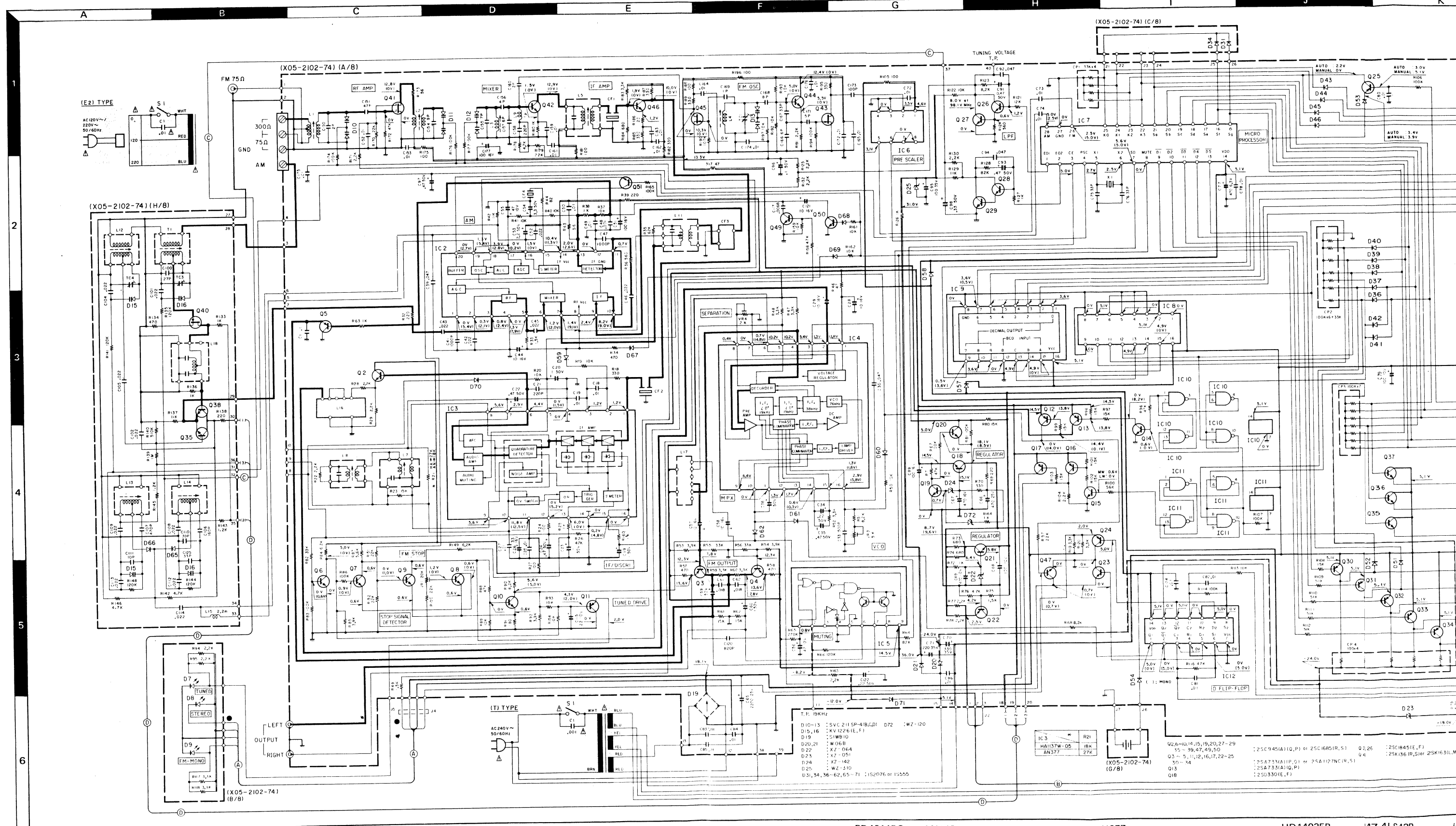
B: X05-212 \* - \* \*

# KT-51L/LB KT-51L/LB

## PC BOARD

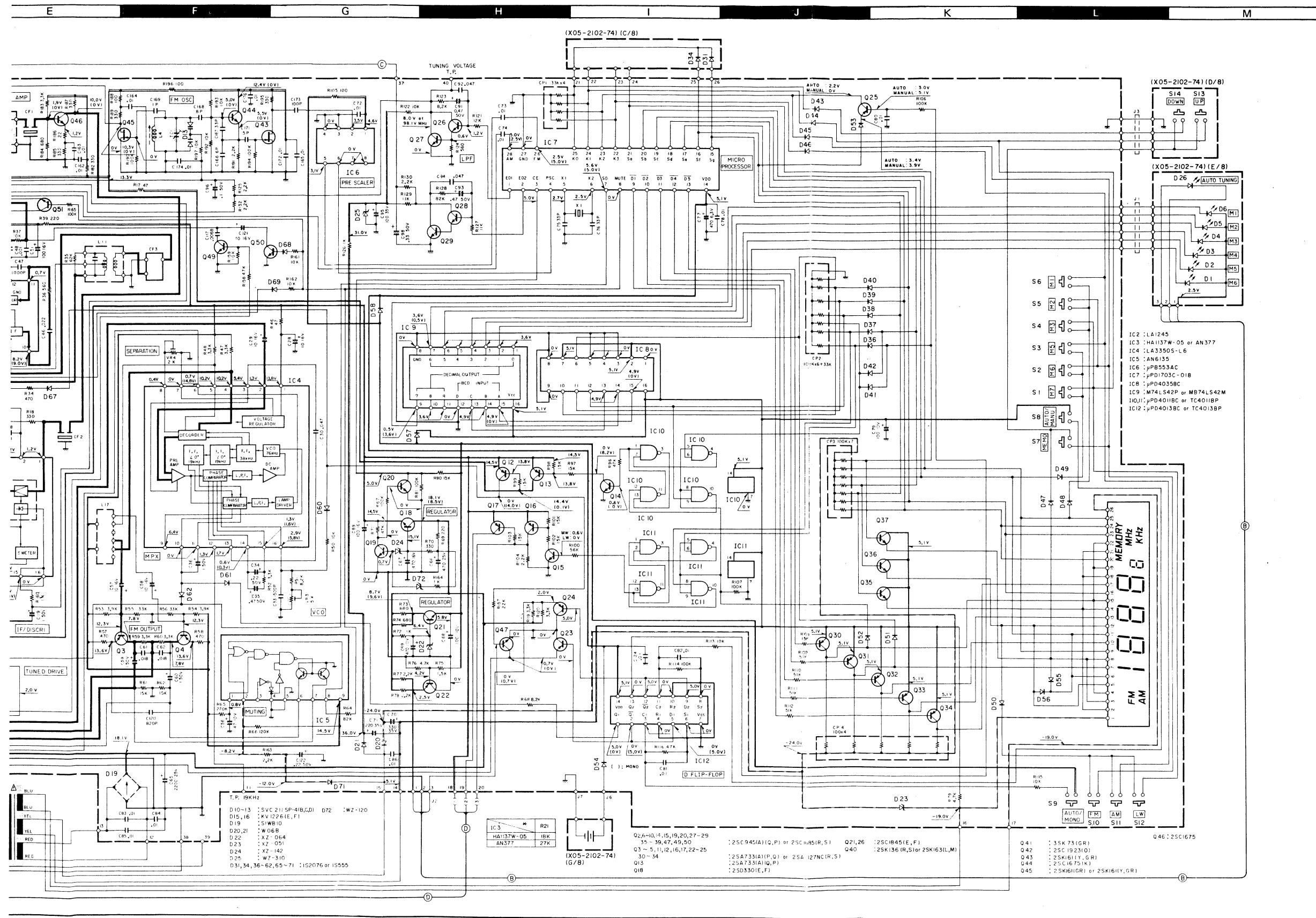
TUNER (X05-2120-11) Component side view





# QUARTZ SYNTHESIZER STEREO TUNER

# KT-511



## SPECIFICATIONS

### FM tuner section

Sensitivity at 75 ohms	
Mono: S/N 26 dB, 40 kHz Dev	0.95 μV
Stereo: S/N 46 dB, 46 kHz Dev	25 μV
Limiting Level	
-3 dB, Point, 40 kHz Dev	0.7 μV
Frequency Response	30 Hz ~ 15 kHz
	+0.2 dB, -2.0 dB

### Total Harmonic Distortion

Mono: 1 kHz, 40 kHz Dev	0.2%
Stereo: 1 kHz, 46 kHz Dev	0.4%

### S/N Weighted (IEC-A)

Mono: 40 kHz Dev., 1 mV Input	68 dB
Stereo: 46 kHz Dev., 1 mV Input	63 dB

### S/N Ratio (IHF)

Mono: 75 kHz Dev., 1 mV Input	72 dB
Stereo: 75 kHz Dev., 1 mV Input	69 dB

### FM Stereo Separation: 1 mV Input (DIN)

250 Hz	38 dB
1 kHz	40 dB
6.3 kHz	30 dB
12.5 kHz	24 dB

### Image Rejection Ratio

300 kHz, 20 dB input	73 dB
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### Selectivity

IF Rejection Ratio	90 dB
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### AM Suppression Ratio

Spurious Rejection Ratio	47 dB
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### Capture Ratio

	2 dB
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### MW tuner section

Sensitivity S/N 20 dB	10 μV
S/N Ratio: 1 mV Input	50 dB
Image Rejection Ratio	30 dB

### LW tuner section

Sensitivity S/N 20 dB	20 μV
S/N Ratio: 1 mV Input	46 dB
Image Rejection Ratio	65 dB

### General

#### Power Consumption

IEC	10W
Dimensions (W x H x D)	440 x 74 x 260 mm
Weight (Net)	2.5 kg

Kenwood follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

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Kenwood strebt ständige Verbesserungen in der Entwicklung an. Daher bleiben Änderungen der technischen Daten jederzeit vorbehalten.

CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

μPB553AC

AN6135

TC4011BP  
TC4013BP

μPD4011BC  
μPD4013BC

AN115

LA3350S-L6

AN377

LA1245

HD14035B  
μPD4035BC

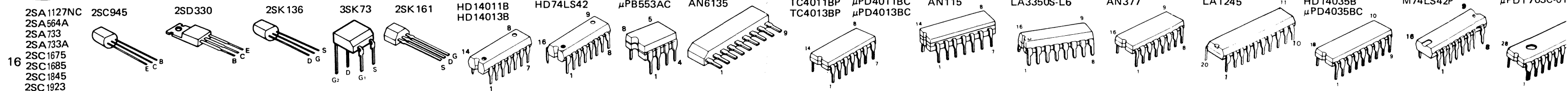
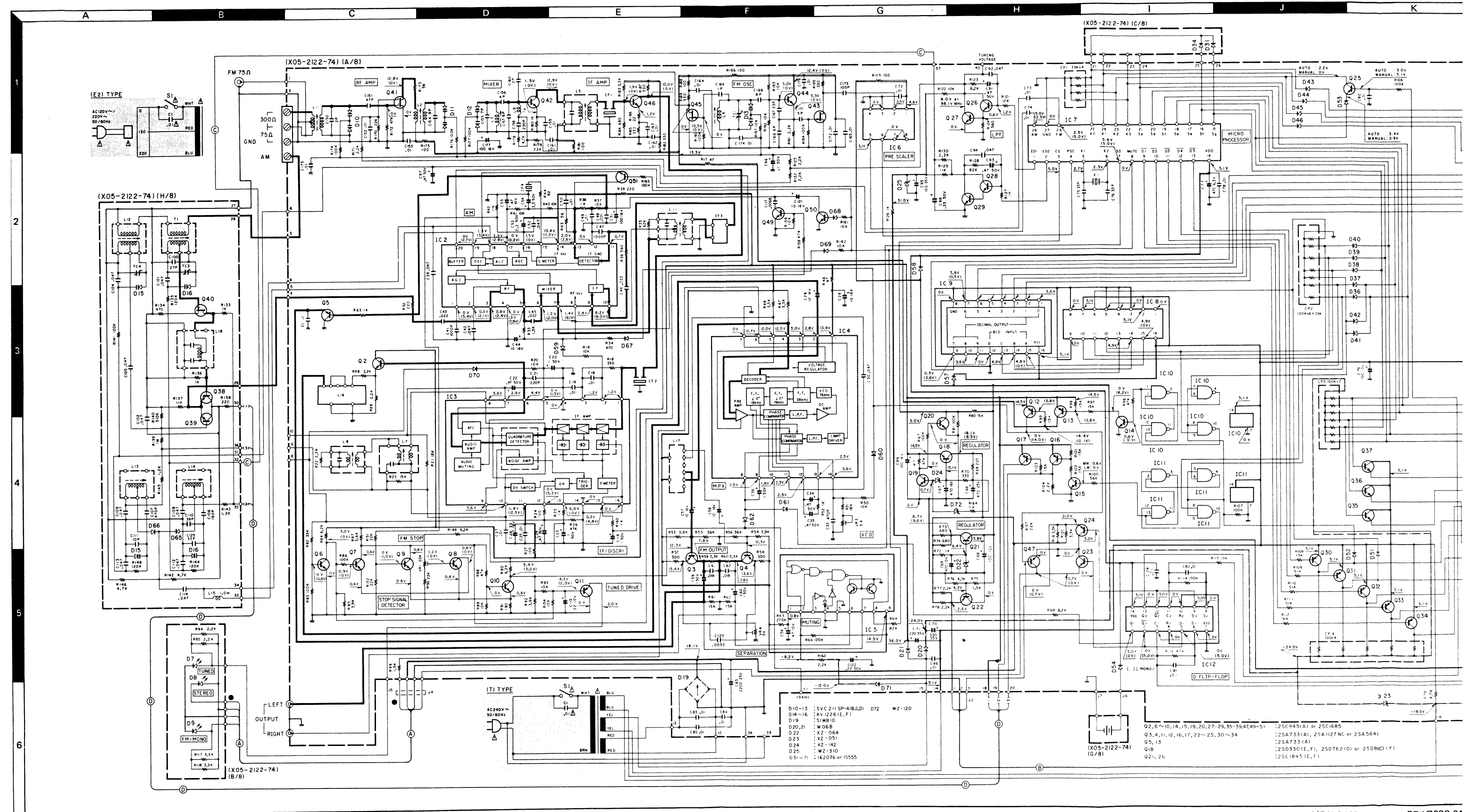
M74LS42P

μPD1703C-018

MB74LS42M

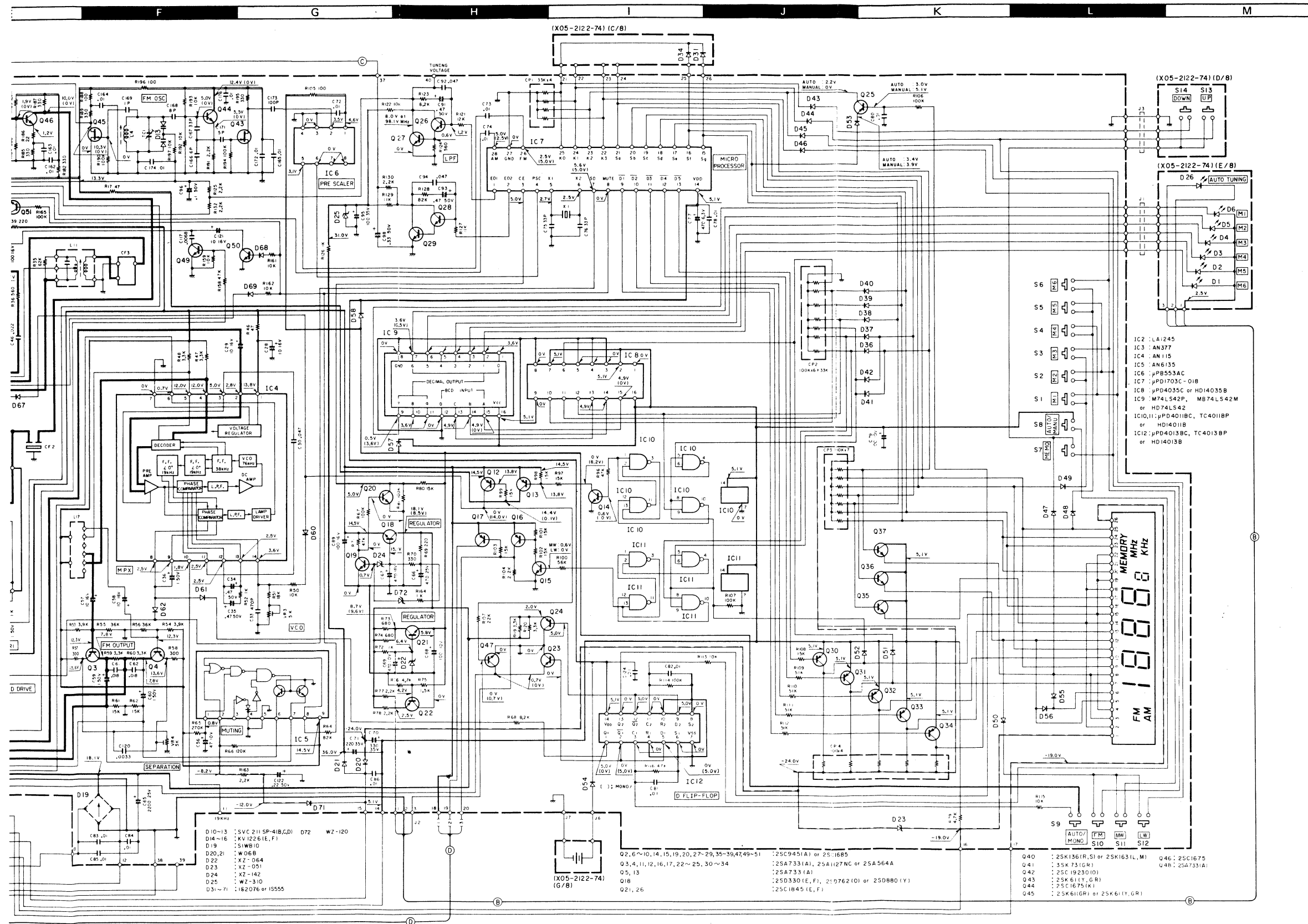
DC voltages are as measured with a high impedance voltmeter during reception of the FM broadcast signal (with a signal strength of 60 dB at the ANT terminal). Values may vary slightly due to variations between individual instruments or/and units. Values in parentheses are as measured during reception of the AM broadcast signal (with a signal strength of 60 dB at the ANT terminal).





# QUARTZ SYNTHESIZER STEREO TUNER

# KT-51L



## SPECIFICATIONS

### FM tuner section

Sensitivity at 75 ohms	
Mono: S/N 26 dB, 40 kHz Dev	0.95 $\mu$ V
Stereo: S/N 46 dB, 46 kHz Dev	25 $\mu$ V
Limiting Level	
-3 dB, Point, 40 kHz Dev	0.7 $\mu$ V
Frequency Response	30 Hz ~ 15 kHz +0.2 dB, -2.0 dB

### Total Harmonic Distortion

Mono: 1 kHz, 40 kHz Dev	0.2%
Stereo: 1 kHz, 46 kHz Dev	0.4%

### S/N Weighted (IEC-A)

Mono: 40 kHz Dev., 1 mV Input	68 dB
Stereo: 46 kHz Dev., 1 mV Input	63 dB

### S/N Ratio (IHF)

Mono: 75 kHz Dev., 1 mV Input	72 dB
Stereo: 75 kHz Dev., 1 mV Input	69 dB

### FM Stereo Separation: 1 mV Input (DIN)

250 Hz	38 dB
1 kHz	40 dB
6.3 kHz	30 dB
12.5 kHz	24 dB
Image Rejection Ratio	80 dB

### Image Rejection Ratio

Selectivity	
300 kHz, 20 dB input	73 dB
IF Rejection Ratio	90 dB
AM Suppression Ratio	47 dB
Spurious Rejection Ratio	90 dB
Capture Ratio	2 dB

### MW tuner section

Sensitivity S/N 20 dB	10 $\mu$ V
S/N Ratio: 1 mV Input	50 dB
Image Rejection Ratio	30 dB

### LW tuner section

Sensitivity S/N 20 dB	20 $\mu$ V
S/N Ratio: 1 mV Input	46 dB
Image Rejection Ratio	65 dB

### General

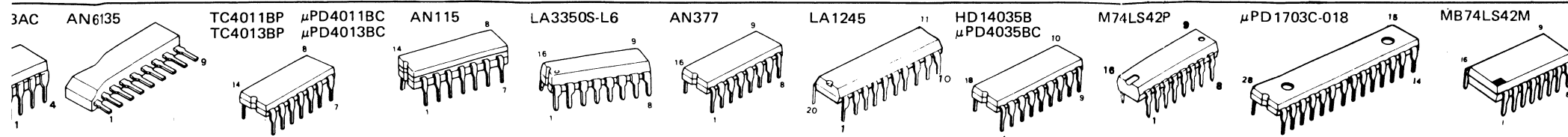
Power Consumption	
IEC	10W
Dimensions (W x H x D)	440 x 74 x 260 mm
Weight (Net)	2.5 kg

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DC voltages are as measured with a high impedance voltmeter during reception of the FM broadcast signal (with a signal strength of 60 dB at the ANT terminal). Values may vary slightly due to variations between individual instruments or/and units. Values in parentheses are as measured during reception of the AM broadcast signal (with a signal strength of 60 dB at the ANT terminal).





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KT-51L						
11	1A		A01-0403-14	METALLIC CABINET		
12	2A	*	A20-3487-03	PANEL ASSY	T	
12	2A	*	A20-3488-03	PANEL ASSY	E	
13	2A	*	B10-0385-03	FRONT GLASS		
-			B46-0098-03	WARRANTY CARD	E	
-		*	B50-4695-00	INSTRUCTION MANUAL (FRENCH)	E	
-		*	B50-4697-00	INSTRUCTION MANUAL	T	
-		*	B50-4699-00	INSTRUCTION MANUAL	E	
△ C1	2A		C91-0079-05	CERAMIC 0.01UF AC125V		
△ 14	2A		E03-0053-15	AC INLET	E	
△ 15	2A, 2B		E30-0587-15	AC POWER CORD	T	
△ 15	2A, 2B		E30-1329-05	AC POWER CORD (INLET)	E	
16	1A		E30-0505-05	AUDIO CORD		
17	1A		E04-0004-05	RF COAXIAL CABLE RECEPTACLE		
-		*	H01-4744-04	ITEM CARTON CASE	T	
-		*	H01-4745-04	ITEM CARTON CASE	E	
-		*	H01-4763-04	ITEM CARTON CASE	E	S
-			H10-1595-03	POLYSTYRENE FOAMED FIXTURE		J
-			H25-0078-04	PROTECTION BAG		
-			H25-0179-04	PROTECTION BAG		
20	3A, 3B		J02-0121-05	FOOT		
21	2B		J19-0626-12	ANTENNA HOLDER		
△ 22	2B		J42-0083-05	POWER CORD BUSHING	T	
-			J61-0045-15	WIRE BAND		
23	2A		K29-1176-04	KNOB ASSY POWER		
24	2A		K27-0967-04	KNOB (BUTTON) PRESET		
25	2B		K27-0675-04	KNOB (BUTTON) MEMORY, MANU/AUTO		
26	2B	*	K27-0677-04	KNOB (BUTTON) AM, FM, FM MODE, LW		
27	3A		K27-0966-04	KNOB (IN PANEL ASSY) TUNING		
△ 28	1A		L01-2492-05	POWER TRANSFORMER	T	
28	1A		L01-2497-05	POWER TRANSFORMER	E	
29	1A		N09-0287-05	SEMS(TAPTITE SCREW) TRANSFORMER		
30	3B		N09-0292-05	SCREW GND		
31	1A, 1B		N09-0377-05	TAPTITE SCREW CASE		
32	2B		N29-0033-05	PUSH RIVET Ø3X6.5		
33	1B, 2B		N29-0216-05	PUSH RIVET		
△ 31	2A		S40-1067-05	PUSH SWITCH (POWER TYPE)		
35	2B		T90-0104-15	LOOP ANTENNA		
37	1A		T90-0202-05	ANTENNA ADAPTOR		
KT-51LB						
11	1A	*	A01-0418-02	METALLIC CABINET		
12	2A	*	A20-3568-03	PANEL ASSY		
13	2A	*	B10-0385-03	FRONT GLASS		
-			B46-0098-03	WARRANTY CARD		
-		*	B50-4695-00	INSTRUCTION MANUAL (FRENCH)		
-		*	B50-4699-00	INSTRUCTION MANUAL		
△ C1	2A		C91-0079-05	CERAMIC 0.01UF AC125V		

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T: England

U: PX(Far East, Hawaii)

Remarks:

J: for sets made in Japan.

S: for sets made in Singapore.

UE: AAFES(Europe)

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14	2A		E03-0053-15	AC INLET		
15	2A, 2B		E30-1329-05	AC POWER CORD (INLET)		
15	2A, 2B		E90-0020-05	INSULATING COVER		
16	1A		E30-0505-05	AUDIO CORD		
17	1A		E04-0004-05	RF COAXIAL CABLE RECEPTACLE		
-		*	H01-4803-04	ITEM CARTON CASE		
-			H10-1595-03	POLYSTYRENE FOAMED FIXTURE		
-			H25-0078-04	PROTECTION BAG		
-			H25-0179-04	PROTECTION BAG		
20	3A, 3B		J02-0121-05	FOOT Ø23X8		
21	2B		J19-0626-12	ANTENNA HOLDER		
-			J61-0045-15	WIRE BAND		
23	2A		K29-1176-04	KNOB ASSY POWER		
24	2A	*	K27-0967-04	KNOB (BUTTON) PRESET		
25	2B		K27-0675-04	KNOB (BUTTON) MEMORY, MANU/AUTO		
26	2B		K27-0677-04	KNOB (BUTTON) AM, FM, FM MODE, LW		
27	3A		K27-0966-04	KNOB (IN PANEL ASSY) TUNING		
28	1A		LD1-2497-05	POWER TRANSFORMER		
29	1A		N09-0287-05	SEMS(TAPTITE SCREW) TRANSFORMER		
30	3B		N09-0292-05	SCREW GND		
31	1A, 1B		N89-3008-45	SCREW (BI-TAP) CASE		
32	2B		N29-0033-05	PUSH RIVET Ø3X6.5		
33	1B, 2B		N29-0216-05	PUSH RIVET		
S1	2A		S40-1067-05	PUSH SWITCH (POWER TYPE)		
35	2B		T90-0104-15	LOOP ANTENNA		
37	1A		T90-0202-05	FEEDER ANTENNA		
TUNER (X05-2102-74, X05-2122-74)						
D1 -6	2B, 2A		B30-0368-05	LED (PG5532KX) M1,2,3,4,5,6		
D7	2A	*	B30-0347-05	LED (PY5532K) TUNED		
D8	2A	*	B30-0348-05	LED (PR5532K) STEREO		
D9	2A	*	B30-0347-05	LED (PY5532K) FM-MONO		
D26		*	B30-0347-05	LED (PY5532K) AUTO-TUNING		
C1			CQ93FM1H104K	MYLAR 0.1UF K		
C18 ,19			C91-0083-05	CERAMIC 0.01UF N		
C21			CC45FSL1H221J	CERAMIC 220PF J		
C25			C91-0083-05	CERAMIC 0.01UF N		
C27			C91-0083-05	CERAMIC 0.01UF N		
C30			CQ93M1H473J	MYLAR 0.047UF J		
C33			CQ09FS1H152J	POLYSTY 1500PF J		A
C33			CQ09FS1H471J	POLYSTY 470PF J		B
C39			CK45FF1H473Z	CERAMIC 0.047UF Z		
C41			CK45B1H102K	CERAMIC 0.001UF K		
C42			CK45F1H473Z	CERAMIC 0.047UF Z		B
C42 ,43			C91-0085-05	CERAMIC 0.022UF N		A
C43			CK45F1H223Z	CERAMIC 0.022UF Z		B
C45 ,46			C91-0085-05	CERAMIC 0.022UF N		
C47			CK45FB1H102K	CERAMIC 0.001UF K		
C48			CK14D1H102M	CERAMIC 1000PF M		
C49 ,50			C91-0083-05	CERAMIC 0.01UF N		
C52			CK45F1H473Z	CERAMIC 0.047UF Z		B
C52			C91-0085-05	CERAMIC 0.022UF N		A

E: Scandinavia &amp; Europe H: Audio Club K: USA

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△ indicates safety critical components.

S: South Africa T: England U: PX(Far East, Hawaii)

Remarks:

UE: AAFES(Europe) X: Australia M: Other Areas

A: X05-210 \* - \* \*

B: X05-212 \* - \* \*

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C61 ,62			CQ93M1H183J	MYLAR 0.018UF J		
C72 -74			CK45FF1H103Z	CERAMIC 0.01UF Z		
C75 ,76			CC45CH1H330J	CERAMIC 33PF J		
C78			CK45FF1H103Z	CERAMIC 0.01UF Z		
C80 -86			CK45FF1H103Z	CERAMIC 0.01UF Z		
C91			CE04GW1HR47M	LL-ELEC 0.47UF 50WV		
C92			CQ93FM1H473K	MYLAR 0.047UF K		
C93			CE04GW1HR47M	LL-ELEC 0.47UF 50WV		
C94			CQ93FM1H473K	MYLAR 0.047UF K		
C96			CE04GW1HOR1M	LL-ELEC 0.1UF 50WV		
C97			CE04GW1HR47M	LL-ELEC 0.47UF 50WV		
C98			CE04GW1HR33M	LL-ELEC 0.33UF 50WV		
C100			CC45SL1H270J	CERAMIC 27PF J		
C101,102			CK45F1H473Z	CERAMIC 0.047UF Z		B
C101,102			C91-0085-05	CERAMIC 0.022UF N		A
C104,105			CK45F1H473Z	CERAMIC 0.047UF Z		B
C104,105			C91-0085-05	CERAMIC 0.022UF N		A
C106			CQ09FS1H161J	POLYSTY 160PF J		
C107			CQ09FS1H471J	POLYSTY 470PF J		
C108,109			CK45F1H473Z	CERAMIC 0.047UF Z		B
C108,109			C91-0083-05	CERAMIC 0.01UF N		A
C110			CC45CH1H390J	CERAMIC 39PF J		
C111			CC45UJ1H100D	CERAMIC 10PF D		
C112-114			CK45F1H473Z	CERAMIC 0.047UF Z		B
C112-114			C91-0085-05	CERAMIC 0.022UF N		A
C117			CQ93M1H682K	MYLAR 0.0068UF K		
C120			CK45B1H821K	CERAMIC 820PF K		A
C120			CQ92M1H332K	MYLAR 0.0033UF K		B
C124			CK45F1H103Z	CERAMIC 0.01UF Z		
C125			CC45CH1H330J	CERAMIC 33PF J		
C150			CC45SL1H020C	CERAMIC 2PF C		
C151			CC45SL1H470J	CERAMIC 47PF J		
C152,153			CK45F1H103Z	CERAMIC 0.01UF Z		
C154			CC45SL1H090D	CERAMIC 9PF D		
C155			CC45SL1H070D	CERAMIC 7PF D		
C156			CC45SL1H040D	CERAMIC 4PF D		
C157			CC45SL1H060D	CERAMIC 6PF D		
C158			CC45SL1H221J	CERAMIC 220PF J		
C159			CK45F1H103Z	CERAMIC 0.01UF Z		
C160			CC45SL1H020C	CERAMIC 2PF C		
C161-165			CK45F1H103Z	CERAMIC 0.01UF Z		
C166			CC45CH1H060D	CERAMIC 6PF D		
C167			CC45CH1H330J	CERAMIC 33PF J		
C168			CC45UJ1H080D	CERAMIC 8PF D		
C169		*	CC45CH1H010C	CERAMIC 1PF C		
C171			CC45CH1H050C	CERAMIC 5PF C		
C172			CK45F1H103Z	CERAMIC 0.01UF Z		
C173			CC45SL1H101J	CERAMIC 100PF J		
C174-176			CK45F1H103Z	CERAMIC 0.01UF Z		
TC1			C05-0302-05	CERAMIC TRIM CAP. 11PF		
TC3 ,4			C05-0303-05	CERAMIC TRIM CAP 20PF		
100	1B	*	E13-0217-05	PHONE JACK		
101	1B		E20-0439-05	ANTENNA TERMINAL BOARD		

E: Scandinavia & Europe H: Audio Club K: USA

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Remarks:

A: X05-210 \* - \* \*

B: X05-212 \* - \* \*

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CF1		*	L72-0190-05	CERAMIC FILTER		
CF2		*	L72-0195-05	CERAMIC FILTER		
CF3			L72-0097-05	CERAMIC FILTER		
CF4			L72-0096-05	CERAMIC FILTER		
L1		*	L31-0475-05	FM-RF COIL		
L2 ,3		*	L31-0476-05	FM-RF COIL		
L4		*	L32-0270-05	FM OSCILLATING COIL		
L5			L30-0326-05	FM IFT		
L7			L30-0316-05	FM IFT		
L8			L30-0317-05	FM IFT		
L11			L30-0337-05	AM IFT		
L12		*	L31-0474-05	MW-RF COIL		
L13		*	L32-0271-05	MW OSCILLATING COIL		
L14			L32-0272-05	LW OSC COIL		
L15			L40-1021-03	FIXED INDUCTOR		
L16			L79-0125-05	LC FILTER		
L17			L79-0140-05	LC FILTER		
L18			L79-0119-05	LC FILTER		
L19			L40-1092-11	FIXED INDUCTOR 1.0UH M		
X1			L77-0573-05	CRYSTAL RESONATOR 4.5MHZ		
CP1			R90-0140-05	MULTI-COMP 33K X4		
CP2		*	R90-0184-05	MULTI-COMP		
CP3			R90-0132-05	MULTI-COMP 100K X7		
CP4		*	R90-0183-05	MULTI-COMP 100K X5		
R17			RD14GB2E470J	FL-PROOF RD 47 J 2E		
R27			RD14GB2E101J	FL-PROOF RD 100 J 2E		
R46			RD14GB2E470J	FL-PROOF RD 47 J 2E		
R69		*	RD14GB2E221J	FL-PROOF RD 220 J 2E		
R126		*	RD14GB2E102J	FL-PROOF RD 1K J 2E		
VR1			R12-3313-05	TRIMMING POT 20K (FM STOP)		
VR3			R12-2305-05	TRIMMING POT 5K (VCO)		A
VR3 ,4			R12-2305-05	TRIMMING POT 5K (VCO,SEP)		B
VR4			R12-1313-05	TRIMMING POT 2K (SEPARATION)		A
S1 -12	2B	*	S40-1052-05	PUSH SWITCH (SELECTOR, MEMORY)		
S13 ,14	2B	*	S40-1054-05	PUSH SWITCH (TUNING UP, DOWN)		
T1			T90-0117-05	ANTENNA		
102	2B		FIP7GB	FLUORESCENT INDICATOR TUBE		
D10 -13		*	SVC211SP-4(BCD)	VARIABLE CAPACITANCE DIODE		
D15 ,16			KV1226(EF)	VARIABLE CAPACITANCE DIODE		
D19			S1WB10	DIODE		
D20 ,21			W06B	DIODE		
D22			XZ-064	ZENER DIODE		
D23			WZ-051	ZENER DIODE		
D23			XZ-051	ZENER DIODE		
D24			XZ-142	ZENER DIODE		
D25		*	WZ-310	ZENER DIODE		
D31			1S1555	DIODE		
D31			1S2076	DIODE		
D34			1S1555	DIODE		
D34			1S2076	DIODE		
D36 -62			1S1555	DIODE		
D36 -62			1S2076	DIODE		
D65 -71			1S1555	DIODE		

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X: Australia

M: Other Areas

A: X05-210 \* - \* \*

B: X05-212 \* - \* \*

## PARTS LIST

\* New Parts

Parts without Parts No. are not supplied.

Les articles non mentionnés dans le Parts No. ne sont pas fournis.

Teile ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕向	Re- marks 備考
D65 -71			1S2076	DIODE		
D72			WZ-120	ZENER DIODE		
IC2			LA1245	IC (AM)		
IC3			AN377	IC (FM-IF, DET)		
IC4			AN115	IC (MPX)		B
IC4			LA3350S-L6	IC (MPX)		A
IC5			AN6135	IC (MUTING)		
IC6			UPB553AC	IC (PRE SCALER)		
IC7			UPD1703C-018	IC (MICROPROCESSOR)		
IC8			HD14035B	IC (4-STAGE SHIFT RESISTER)		
IC8			UPD4035BC	IC (4-STAGE SHIFT RESISTER)		
IC9			HD74LS42	IC (BCD-T0-DECIMAL DECODER)		
IC9			MB74LS42M	IC (BCD-T0-DECIMAL DECODER)		
IC9			M74LS42P	IC (BCD-T0-DECIMAL DECODER)		
IC10,11			HD14011B	IC (QUAD 2-INPUT NAND GATE)		
IC10,11			TC4011BP	IC (QUAD 2-INPUT NAND GATE)		
IC10,11			UPD4011BC	IC (QUAD 2-INPUT NAND GATE)		
IC12			HD14013B	IC (DUAL D FLIP-FLOP)		
IC12			TC4013BP	IC (DUAL D FLIP-FLOP)		
IC12			UPD4013BC	IC (DUAL D FLIP-FLOP)		
Q2			2SC1685(R,S)	TRANSISTOR		
Q2			2SC945(A)(Q,P)	TRANSISTOR		
Q3 -5			2SA733(A)(Q,P)	TRANSISTOR		
Q3 ,4			2SA1127NC(R,S)	TRANSISTOR		
Q3 ,4			2SA564A	TRANSISTOR		
Q6 -10			2SC1685(R,S)	TRANSISTOR		
Q6 -10			2SC945(A)(Q,P)	TRANSISTOR		
Q11 -13			2SA733(A)(Q,P)	TRANSISTOR		
Q11 ,12			2SA1127NC(R,S)	TRANSISTOR		
Q11 ,12			2SA564A	TRANSISTOR		
Q14 ,15			2SC1685(R,S)	TRANSISTOR		
Q14 ,15			2SC945(A)(Q,P)	TRANSISTOR		
Q16 ,17			2SA564A	TRANSISTOR		
Q16 ,17			2SA733A	TRANSISTOR		
Q18			2SD330(E,F)	TRANSISTOR		
Q19 ,20			2SC1685(R,S)	TRANSISTOR		
Q19 ,20			2SC945(A)(Q,P)	TRANSISTOR		
Q21			2SC1845(F,E)	TRANSISTOR		
Q22 -25			2SA1127NC(R,S)	TRANSISTOR		
Q22 -25			2SA564A	TRANSISTOR		
Q22 -25			2SA733(A)(Q,P)	TRANSISTOR		
Q26			2SC1845(F,E)	TRANSISTOR		
Q27 -29			2SC1685(R,S)	TRANSISTOR		
Q30 -34			2SA1127NC(R,S)	TRANSISTOR		
Q30 -34			2SA564A	TRANSISTOR		
Q30 -34			2SA733(A)(Q,P)	TRANSISTOR		
Q35 -39			2SC1685(R,S)	TRANSISTOR		
Q35 -39			2SC945(A)(Q,P)	TRANSISTOR		
Q40			2SK136(R,S)	TRANSISTOR		
Q41		*	3SK73(GR)	FET		
Q42		*	2SC1923(0)	TRANSISTOR		
Q43			2SK161(Y,GR)	FET		
Q44			2SC1675(K)	TRANSISTOR		
Q45			2SK161(Y,GR)	FET		
Q46			2SC1675	TRANSISTOR		

E: Scandinavia & Europe H: Audio Club K: USA

P: Canada

△ indicates safety critical components.

S: South Africa

T: England

U: PX(Far East Hawaii)

Remarks:

UE: AAFES(Europe)

X: Australia

M: Other Areas

A: X05-210 \* - \* \*

B: X05-212 \* - \* \*



## PARTS LIST

\* New Parts

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Teile ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕 向	Re- marks 備考
Q47			2SC945(A)(Q,P)	TRANSISTOR		
Q49 -51			2SC1685(R,S)	TRANSISTOR		
Q49 -51			2SC945(A)(Q,P)	TRANSISTOR		
Q27 -29			2SC945(A)(Q,P)	TRANSISTOR		

E: Scandinavia & Europe H:Audio Club K: USA

P: Canada

△ indicates safety critical components

S: South Africa

T: England

U: PX(Far East, Hawaii)

Remarks:

UE : AAFES(Europe)

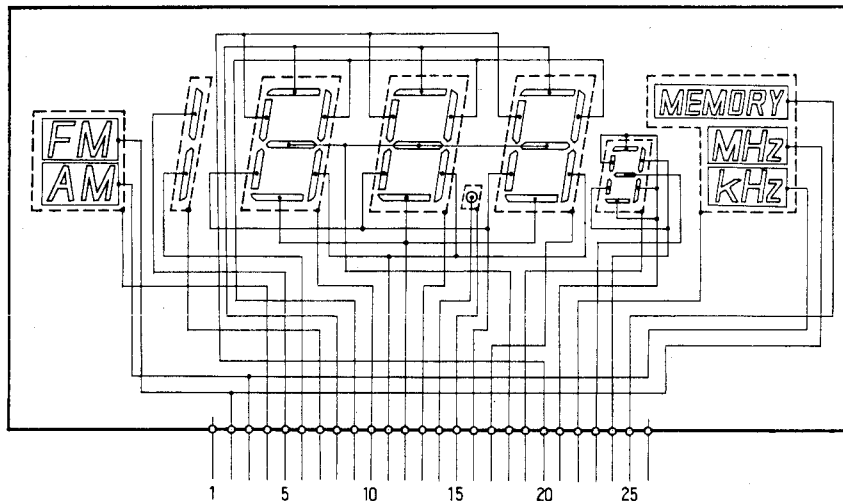
X: Australia

M: Other Areas

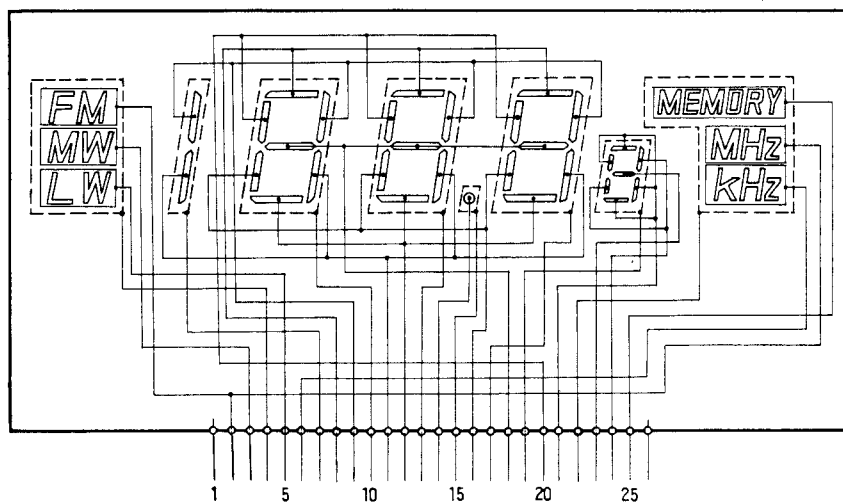
A: X05-210 \* - \* \*

B: X05-212 \* - \* \*

## FIP7D8



## FIP7G8



### Note:

Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on, the U.S. (K) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

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