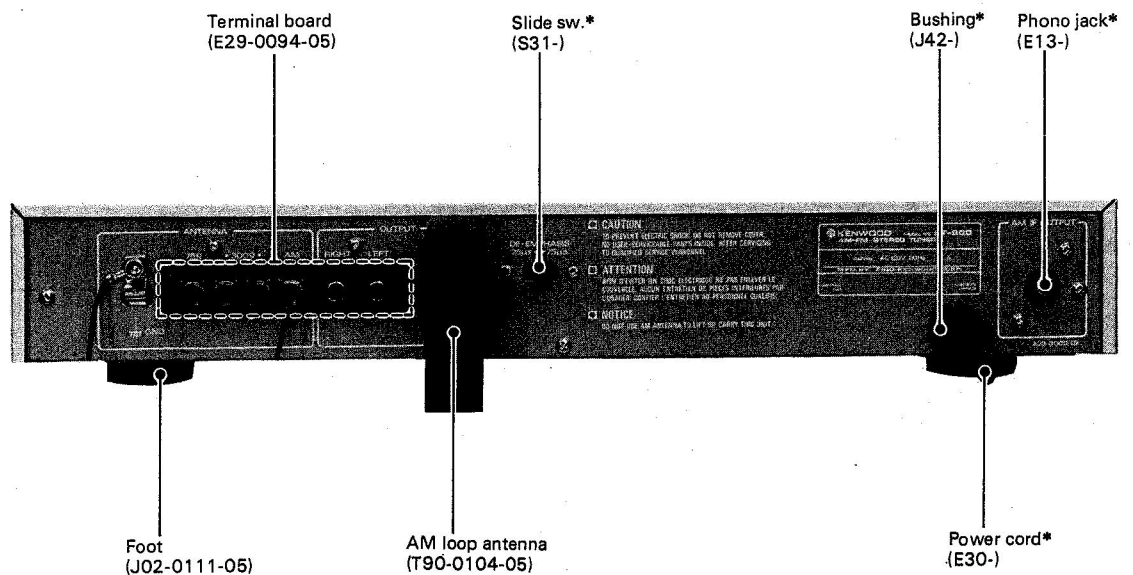
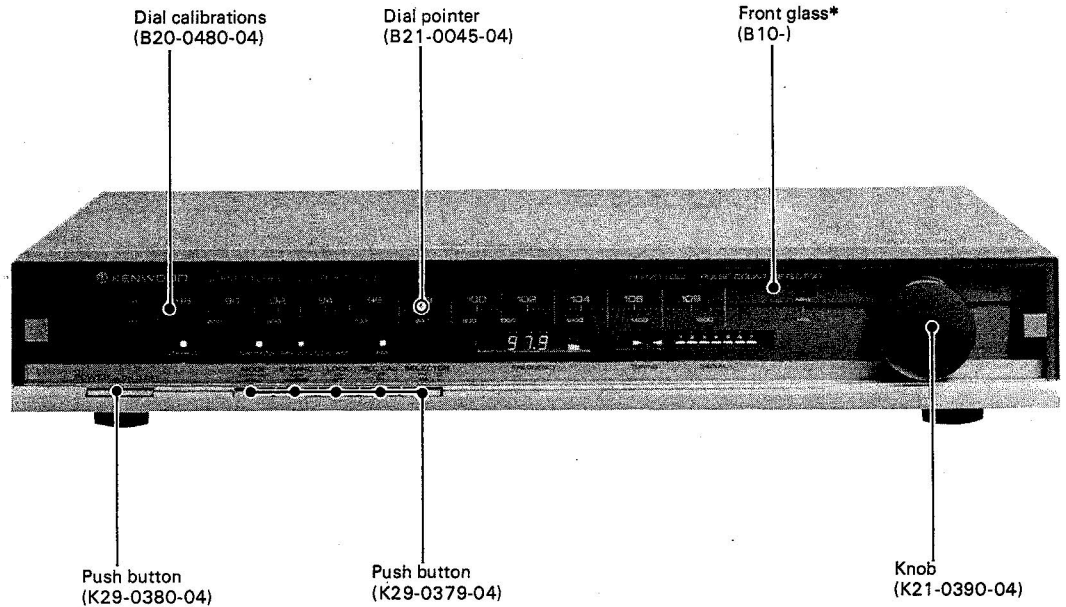


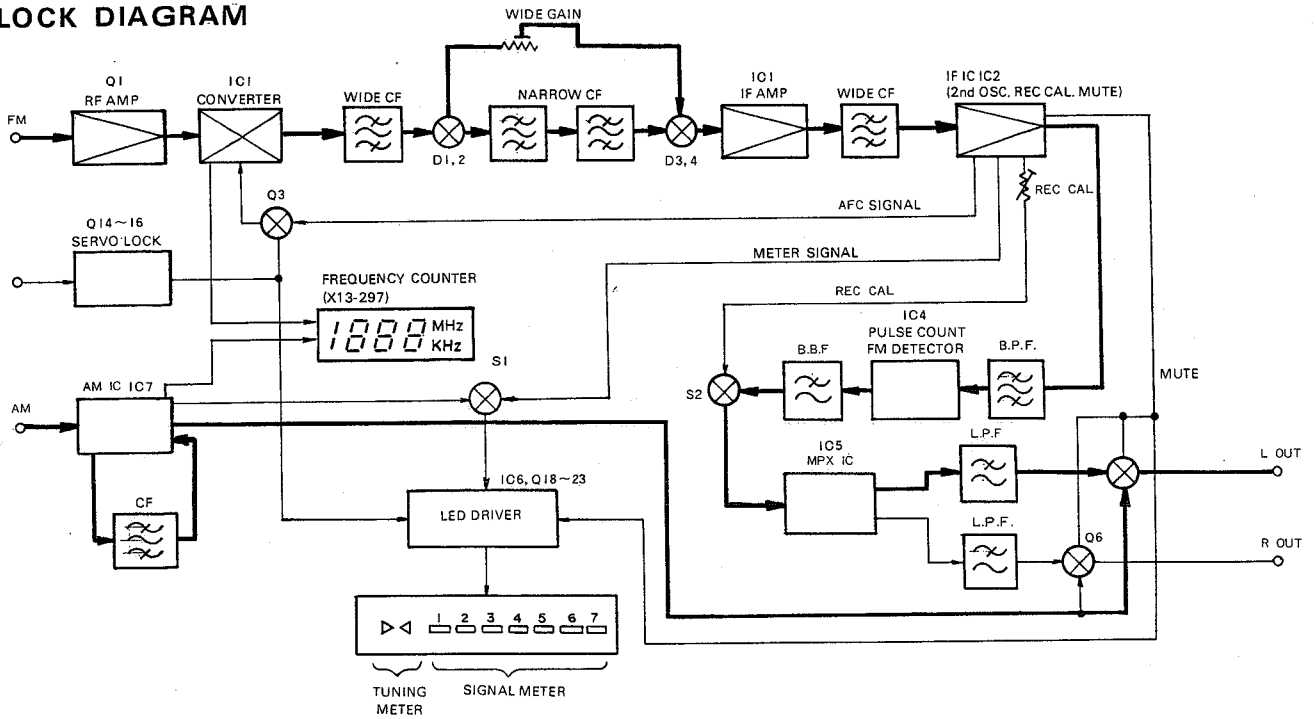
AM-FM STEREO TUNER



* Refer to Parts List (P10)

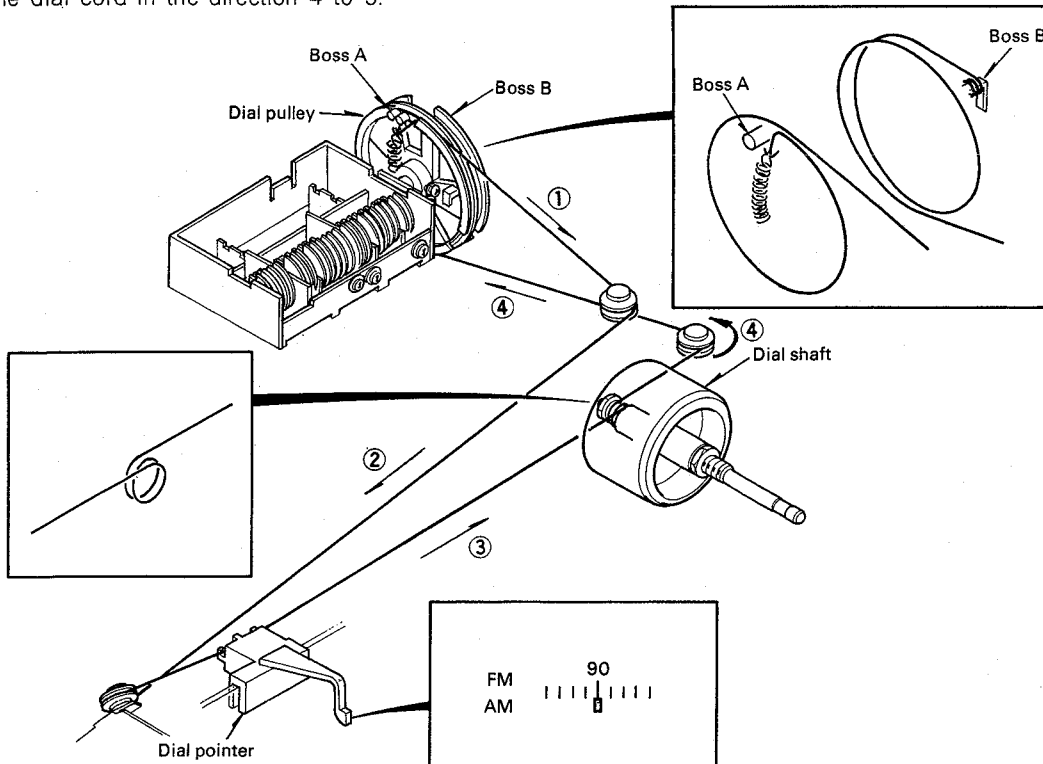
BLOCK DIAGRAM/DIAL CORD STRINGING

BLOCK DIAGRAM



DIAL CORD STRINGING

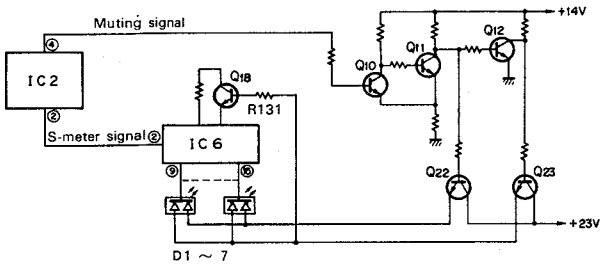
1. Tie the end of the dial cord to the spring, hook the end of the spring to the boss A.
2. Set the dial pulley as illustrated.
3. Dress the dial cord in the direction 1 through 3.
4. Wind the dial cord two turns around the dial shaft starting from its upper side.
5. Dress the dial cord in the direction 4 to 5.
6. Wind the dial cord two turns around the dial pulley starting from its lower side.
7. Tie the end of the dial cord to the boss B.
8. Remove the dial spring from the boss A.
9. Receive a 90 MHz signal, and then mount the dial pointer at the 90 MHz position of the dial calibrations.



CIRCUIT DESCRIPTION

1. LED Signal Strength Meter (S-meter) and Tuning Indicator (T-indicator)

1-1 The S-meter signal output from IC2 is input to LED driver IC6, which drives 7 LEDs. IC6 has a hysteresis characteristic so that fast variation of the antenna input level will not result in flickering of the S-meter LEDs. Each LED chip used in the S-meter includes red and green LEDs, the cathodes of which are connected. When the antenna input level is low, the muting circuit turns Q22 ON to light the red LEDs. When the antenna input level becomes high enough, that is, when a broadcast is correctly tuned, the muting circuit turns Q23 ON to light the green LEDs. In other words, when the muting level is "H", the red LEDs are lit and when it is "L", the green LEDs are lit. When Q23 is ON, Q18 is also ON through R131, increasing the IC6 current and causing the green LEDs to glow more intensely. When replacing Q22 or Q23, a 500 mA Ic is required to drive the seven LEDs.



1-2 The tuning indicator consists of two triangular LEDs situated side-by-side ($\triangleright\triangleleft$) and is located to the left of the S-meter. When a broadcast is tuned from the left (i.e., from lower frequencies), AFC voltage (negative with respect to the reference voltage at pin 11 of IC2) appears at pin 3 of IC2. This voltage is inverted by IC3 (1/2) and applied to Q19 to light the left LED (\triangleright). When the broadcast is correctly tuned, the AFC voltage becomes equal to the reference voltage, so that the output of the inverting amplifier (IC3 (1/2)) is equal to that of the non-inverting amplifier (IC3 (2/2)). Both Q19 and Q20 are then equally driven and both LEDs glow with the same intensity.

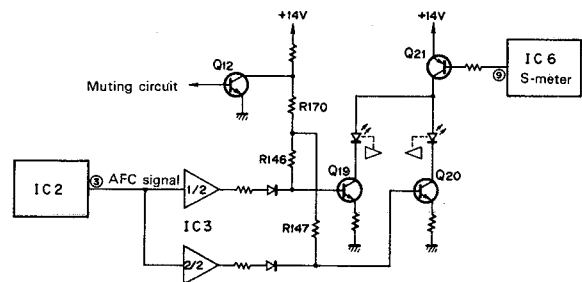
Further, when the receiving frequency is varied toward higher frequencies, the AFC voltage becomes positive

Further, when the receiving frequency is varied toward higher frequencies, the AFC voltage becomes positive with respect to the reference voltage and the input of the non-inverting amplifier increases. Then, Q20 is driven and only the right LED (\triangleleft) is lit.

When the antenna input level is too low (when no S-meter LED is lit), Q21 is OFF and the T-indicator cannot operate.

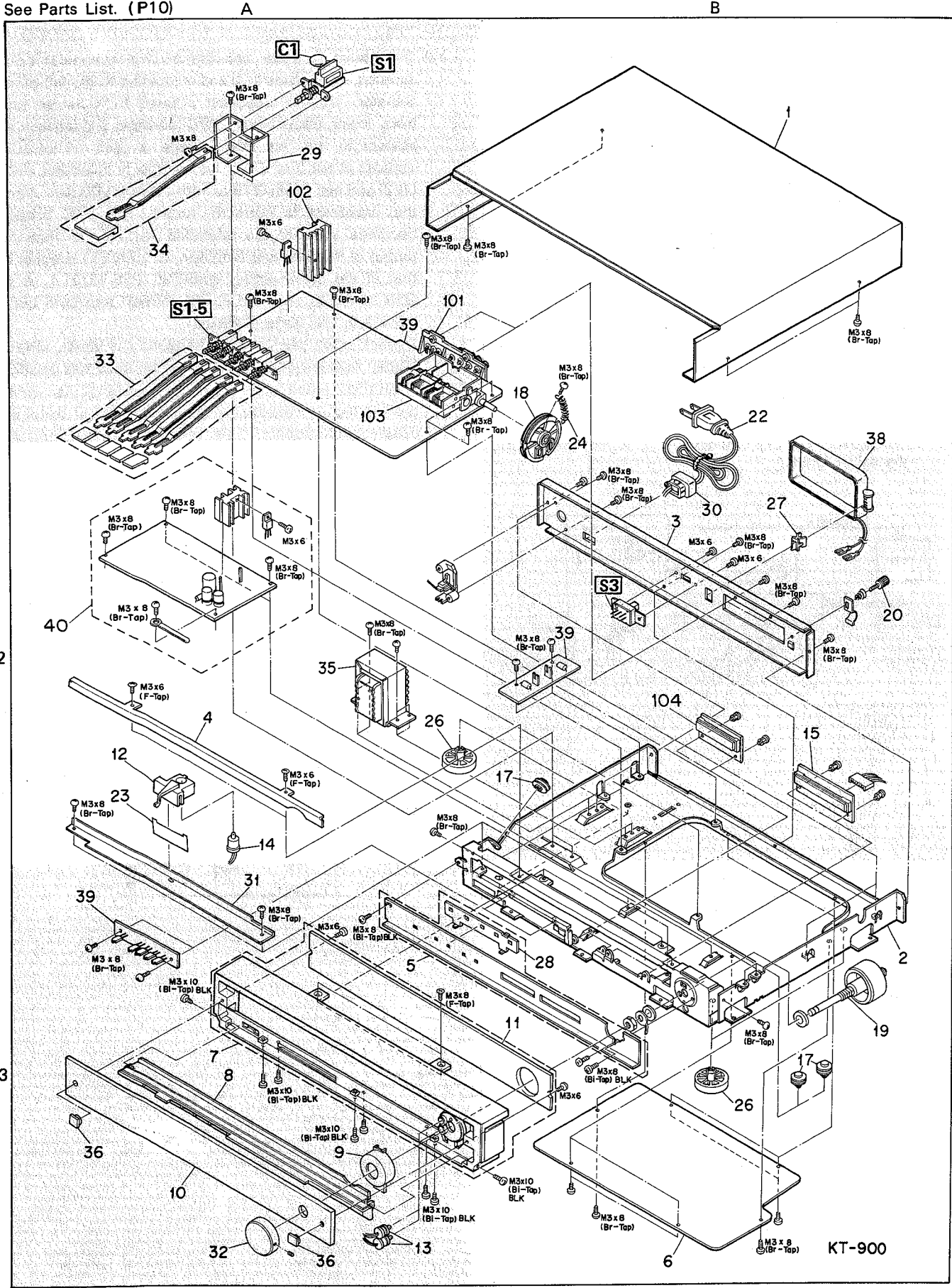
When the servo lock circuit is operating and the green LEDs are lit, the collector level of Q12 is "H" and this level is applied to Q19 and Q20 through R170, R146 and R147.

Thus, both Q19 and Q20 are ON and both T-indicator LEDs glow intensely.



EXPLODED VIEW

See Parts List. (P10)



KT-900

- M3 x 6 : N30-3006-46
- M3 x 8 : N30-3008-46
- M3 x 6 (F-Tap) : N88-3006-46
- M3 x 8 (Br-Tap) : N87-3008-46
- M3 x 8 (Bi-Tap) BLK : N89-3008-45
- M3 x 10 (Bi-Tap) BLK : N89-3010-45

ADJUSTMENT/REGLAGES/ABGLEICH

TEST INSTRUMENT

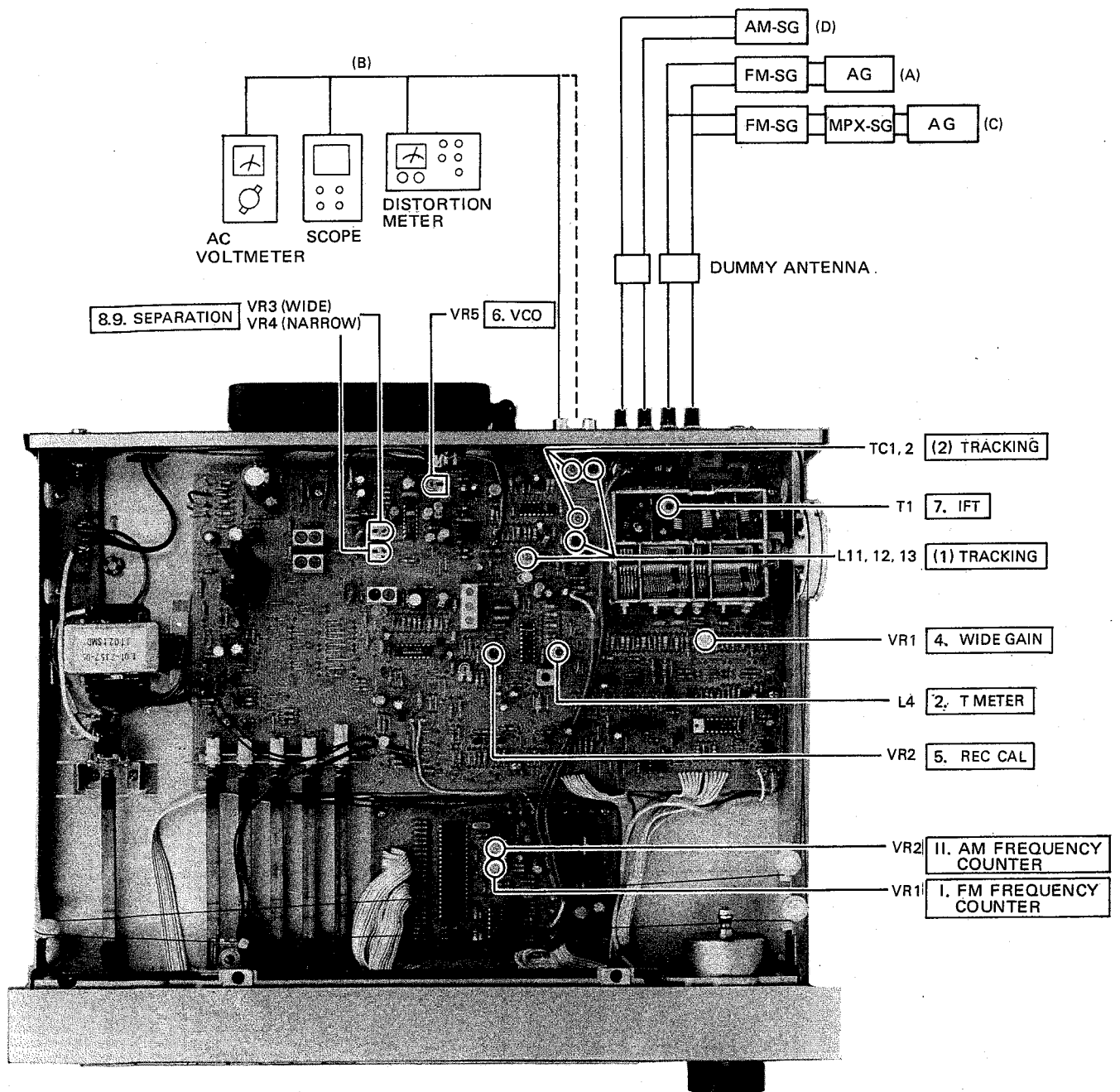
Oscilloscope
 AM signal generator
 FM signal generator
 Audio generator
 AC voltmeter
 FM multiplex generator
 Frequency counter
 DC voltmeter
 Distortion meter
 Dummy antenna

APPAREILLAGE

Oscilloscope
 Générateur MA
 Générateur MF
 Générateur audio fréquences
 Voltmètre CA
 Générateur multiplex stéréo
 Fréquencemètre
 Voltmètre CC
 Distorsiomètre
 Antenna fictive

PRÜFINSTRUMENTE

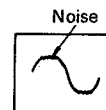
Oszilloskop
 MW-Signalgenerator
 UKW-Signalgenerator
 NF-Signalgenerator
 Wechselspannungsmesser
 UKW-Multiplexgenerator
 Frequenzzähler
 Gleichspannungsmesser
 Klirrfaktormesser
 Antennennachbildung



ADJUSTMENT

NO.	ITEM	SYSTEM CONNECTIONS	TEST EQUIPMENT SETTING	TUNER (RECEIVER) SETTING	ALIGNMENT POINTS	ALIGN FOR	FIG. NO.
FM SECTION Set the MODE switch to AUTO/MUT, IF BAND switch WIDE, LOCK switch ON and REC CAL switch OFF unless otherwise specified.							
1	T METER	(A)/(B)	95 MHz 1 kHz, 75 kHz (Dev)	95 MHz MODE: MONO LOCK: OFF	—	*1	
2	T METER	(A)/(B)	95 MHz 1 kHz, 75 kHz (Dev) 60 dB (ANT input)	95 MHz LOCK: OFF	L4	Both LEDs glow with the same intensity.	
3	WIDE GAIN	(A)/(B)	95 MHz 0 (Dev)	95 MHz IF BAND: NARROW MODE: MONO	—	Set the FM-SG output level so that S-meter indicates 4.	
4	WIDE GAIN	(A)/(B)	ditto	95 MHz IF BAND: WIDE MODE: MONO	VR1	S-meter indicates 4.	
5	REC CAL	(A)/(B)	—	REC CAL: ON	VR2	0.38V	
6	VCO	(A)/Connect a frequency counter to the junction of R56 and VR5 via an AC voltmeter.	95 MHz 0 dev 60 dB (ANT input)	95 MHz	VR5	76 kHz	
7	IFT	(C)/(B)	95 MHz 1 kHz \pm 68.25 kHz dev Selector: L or R Pilot: \pm 6.75 kHz dev 60 dB (ANT input)	95 MHz	T1 (Front end)	Minimum distortion	
8	SEPARATION (WIDE)	(C)/(B)	95 MHz 1 kHz \pm 68.25 kHz dev Selector: L or R Pilot: \pm 6.75 kHz dev 60 dB (ANT input)	95 MHz	VR3	Minimum crosstalk. A compromise adjustment may be required if left-to-right and right-to-left separations are unequal.	
9	SEPARATION (NARROW)	(C)/(B)	ditto	95 MHz IF BAND: NARROW	VR4	ditto	
AM SECTION Keep the AM loop antenna installed.							
(1)	RF ALIGNMENT (AM)	(D)/(B)	600 kHz 400 Hz, 30% mod	AM 600 kHz	L11, 12, 13	Maximum amplitude and symmetry of the oscilloscope display.	
(2)	RF ALIGNMENT (AM)	(D)/(B)	1400 kHz 400 Hz, 30% mod	AM 1400 kHz	TC1, 2	Maximum amplitude And symmetry of the oscilloscope display	
Repeat alignments (1) and (2) several times.							
FREQUENCY COUNTER							
I	FM	(A)	89.10 MHz 0 Dev 20 dB (ANT input)	89.1 MHz MODE: MONO	VR1	Fluorescent indicator	
II	AM	(D)	1440.0 kHz 400 Hz, 30% mod 30 dB (ANT input)	AM 1440 kHz	VR2	ditto	

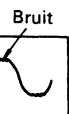
*1. Adjust the tuning knob so that the same amount of noise is observed at the top and bottom of the output waveform with a weak signal.



REGLAGES

N°	ITEM	RACCORDEMENTS DU SYSTEME	REGLAGE DE L'APPAREILLAGE	REGLAGE DU TUNER (AMPLI-TUNER)	POINTS DE L'ALIGNEMENT	ALIGNER POUR	FIG. N°
SECTION MF Placer le MODE dans la position AUTO/MUT., IF BAND sur WIDE, LOCK sur ON et REC CAL sur OFF sauf indique special le ment.							
1	INDICATEUR A ZERO CENTRAL	(A)/(B)	95 MHz 1 kHz (Mod) 75 kHz (Dev)	95 MHz MODE: MONO LOCK: OFF	—	*1	
2	INDICATEUR A ZERO CENTRAL	(A)/(B)	95 MHz 1 kHz (Mod) 75 kHz (Dev) 60 dB (Entrée ANT)	95 MHz LOCK: OFF	L4	Les deux LEDs s'allument avec la même intensité.	
3	GRAND GAIN	(A)/(B)	95 MHz 0 (Dev)	95 MHz IF BAND: NARROW MODE: MONO	—	Régler le niveau de sortie du générateur MF de façon que l'indicateur de champ marque 4.	
4	GRAND GAIN	(A)/(B)	idem	95 MHz IF BAND: WIDE MODE: MONO	VR1	L'indicateur de champ amrque 4.	
5	REC CAL	(A)/(B)	—	REC CAL: ON	VR2	0.38V	
6	OSCILLATEUR CONTROLE PAR LA TENSION	(A)/Connecter un compteur de fréquence à la jonction de R56 et VR5 par un voltmètre CA.	95 MHz 0 dév 60 dB (Entrée ANT)	95 MHz	VR5	76 kHz	
7	IFT	(C)/(B)	95 MHz 1 kHz ±68,25 kHz dév SELECTION: L ou R Signal pilote: ±6,75 kHz dév 60 dB (Entrée ANT)	95 MHz	T1 (Tête H.T.)	Distorsion minimale	
8	SEPARATION (WIDE)	(C)/(B)	95 MHz 1 kHz ±68,25 kHz dév SELECTION: L ou R Signal pilote: ±6,75 kHz dév 60 dB (Entrée ANT)	95 MHz	VR3	Diaphonie minimale. Un compromis de réglage peut être nécessaire si les séparations de gauche à droite et de droite à gauche sont inégales.	
9	SEPARATION (NARROW)	(C)/(B)	idem	95 MHz IF BAND: NARROW	VR4	idem	
SECTION MA Laisser l'antenne boucle MA installée.							
(1)	ALIGNEMENT H.T. (MA)	(D)/(B)	600 kHz 400 Hz, 30% mod	AM 600 kHz	L11, 12, 13	Amplitude et symétrie maximale de l'affichage de l'oscilloscope.	
(2)	ALIGNEMENT H.T. (MA)	(D)/(B)	1400 kHz 400 Hz, 30% mod	AM 1400 kHz	TC1, 2	Amplitude et symétrie maximale de l'affichage de l'oscilloscope.	
Répéter les alignements (1) et (2) plusieurs fois.							
FREQUENCETRE							
I	MF	(A)	89,10 MHz 0 Dév 20 dB (Entrée ANT)	89,1 MHz MODE: MONO	VR1	Indicateur à fréquence	
II	MA	(D)	1440,0 kHz 400 Hz, 30% mod 30 dB (Entrée ANT)	AM 1440 kHz	VR2	idem	

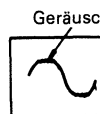
*1. Régler le bouton d'accord en sorte que la même quantité de bruit puisse être observée au sommet et au bas de la forme d'onde de sortie sous des conditions d'alimentation de signal faible.



ABGLEICH

NR.	GEGENSTAND	SYSTEM-ANSCHLÜSSE	PRÜFEINRICHTUNG-EINSTELLUNG	TUNER (RECEIVER)-EINSTELLUNG	ABGLEICH-PUNKTE	ABGLEICHEN FÜR	ABB. NR.
UKW-ABTEILUNG Außers wenn anders angegeben, MODE-Schalter auf AUTO/MUT, IF BAND-Schalter auf WIDE, LOCK-Schalter auf ON und REC CAL-Schalter auf OFF einstellen.							
1	KANALMITTEN-ANZEIGER	(A)/(B)	95 MHz 1 kHz, 75 kHz Hub	95 MHz MODE: MONO LOCK: OFF	—	*1	
2	KANALMITTEN-ANZEIGER	(A)/(B)	95 MHz 1 kHz, 75 kHz Hub 60 dB (ANT: Eingang)	95 MHz LOCK: OFF	L4	Beide LEDs leuchten mit derselben Stärke auf.	
3	FELDSTÄRKE-INSTRUMENT (WEIT)	(A)/(B)	95 MHz 0 (Hub)	95 MHz IF BAND: NARROW MODE: MONO	—	Den Ausgangspegel des UKW-Signalgenerator so einstellen, daß das Feldstärkeinstrument den Wert 4 anzeigt.	
4	FELDSTÄRKE-INSTRUMENT (WEIT)	(A)/(B)	ditto	95 MHz IF BAND: WIDE MODE: MONO	VR1	Wert 4 anzeigt.	
5	REC CAL	(A)/(B)	—	REC CAL: ON	VR2	0.38V	
6	SPANNUNGS-GEREGELTER OSZILLATOR	(A)/Einen Frequenzmesser zur Verbindung von R56 und VR5 über einem Wechselspannungsmesser anschließen.	95 MHz 0 Hub 60 dB (ANT-Eingang)	95MHz	VR5	76 kHz	
7	IFT	(C)/(B)	95 MHz 1 kHz ±68,25 kHz Hub Wähler: L oder R Pilotton: ±6,75 kHz Hub 60 dB (ANT-Eingang)	95 MHz	T1 (Frontende)	Minimaler Klirrfaktor	
8	STEREO KANAL TRENNUNG (WIDE)	(C)/(B)	95 MHz 1 kHz ±68,25 kHz Hub Wähler: L oder R Pilotton: ±6,75 kHz Hub 60 dB (ANT-Eingang)	95 MHz	VR3	Minimales Übersprechen Eine Ausgleichregelung kann notwendig sein, falls links-zu-rechts und rechts-zu-links Trennungen ungleich sind	
9	STEREO KANAL TRENNUNG (NARROW)	(C)/(B)	ditto	95 MHz IF BAND: NARROW	VR4	ditto	
MW-ABTEILUNG Die MW-Rahmenantenne angebracht lassen.							
(1)	HF-ABGLEICH (MW)	(D)/(B)	600 kHz 400 Hz, 30% mod	AM automatische Abstimmung 600 kHz	L11, 12, 13	Maximale Amplitude und Symmetrie des Oszilloskopbildes.	
(2)	HF-ABGLEICH (MW)	(D)/(B)	1400 kHz 400 Hz, 30% mod	AM automatische Abstimmung 1400 kHz	TC1, 2	Maximale Amplitude und Symmetrie des Oszilloskopbildes.	
Abstimmungen (1) und (2) mehrere Male wiederholen.							
FREQUENZZÄHLER							
I	UKW	(A)	89,10 MHz 0 Hub 20 dB ANT-Eingang	FM-MONO 89,1 MHz	VR1	Frequenz-indikator	
II	MW	(D)	1440 kHz 400 Hz, 30% Mod 30 dB ANT-Eingang	AM 1440,0 kHz	VR2	ditto	

*1. Den Abstimmknopf so einstellen, daß an der oberen und unteren Grenze der Ausgangswellen form bei schwachem Signal dasselbe Geräusch auftritt.



BEMERKUNG

Nach der Einstellung, sich vergewissern, daß UKW Empfang unter 87,5 MHz oder über 108,5 MHz nicht möglich ist. Falls die UKW Station in diesem Bereich empfangen werden kann, wie folgt nachregeln.

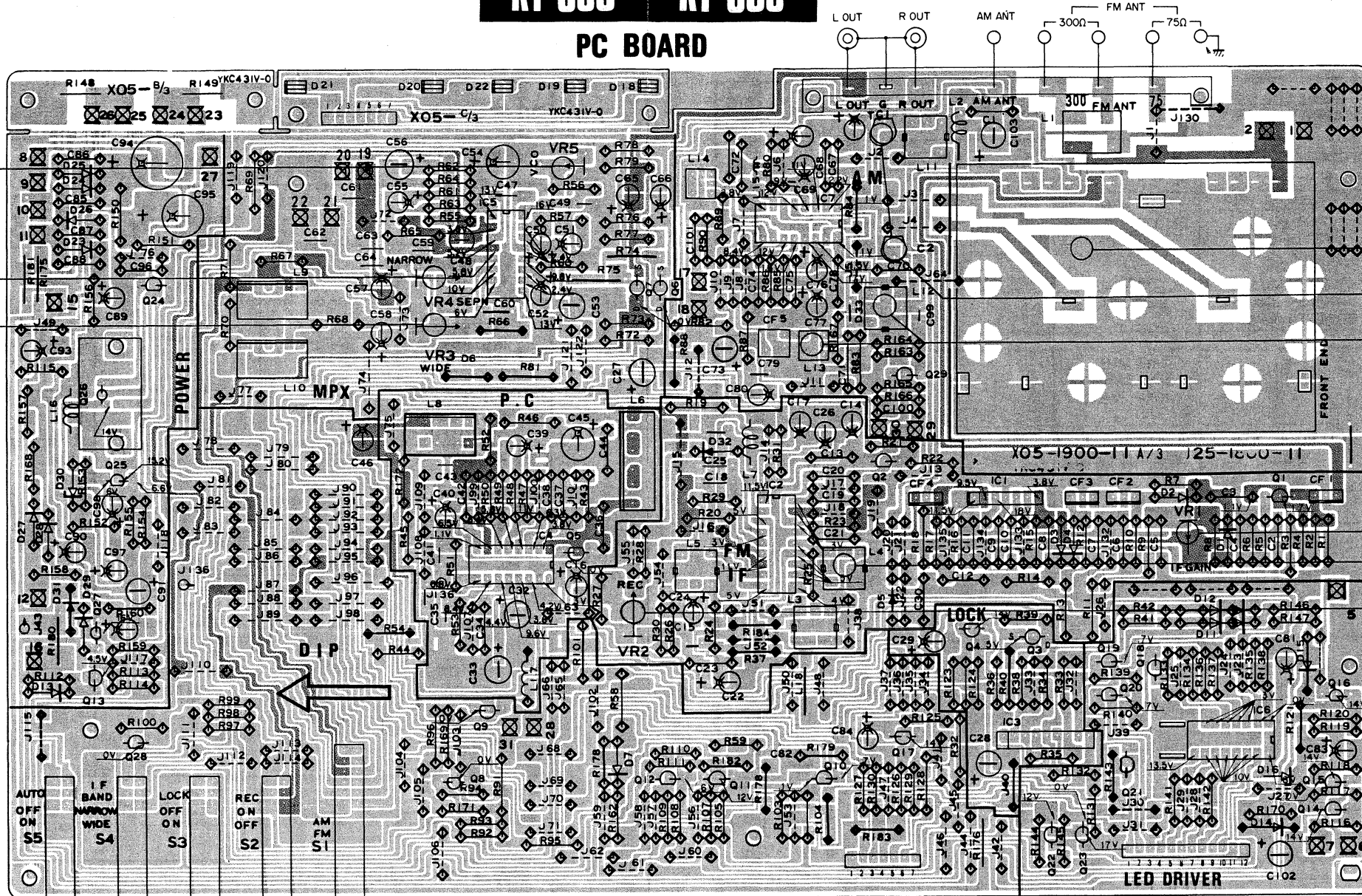
1. UKW-Meßsender auf 108 MHz einstellen, 1 KHz (Mod) und 75 KHz (Dev) und an die antennenbuchse anschließen.

2. Den Astimmanzeiger des Tuners auf 108 MHz einstellen.
3. TCO so einstellen, daß der Abstimmzähler den Mittelpunkt anzeigt.
4. TCR1, TCR2 und TC4 so einstellen, daß der Signalzähler den Höchstwert anzeigt.

PC BOARD

TUNER (X05-190*..*)
Component side view

- 6. VCO
- 9. NARROW SEPARATION
- 8. WIDE



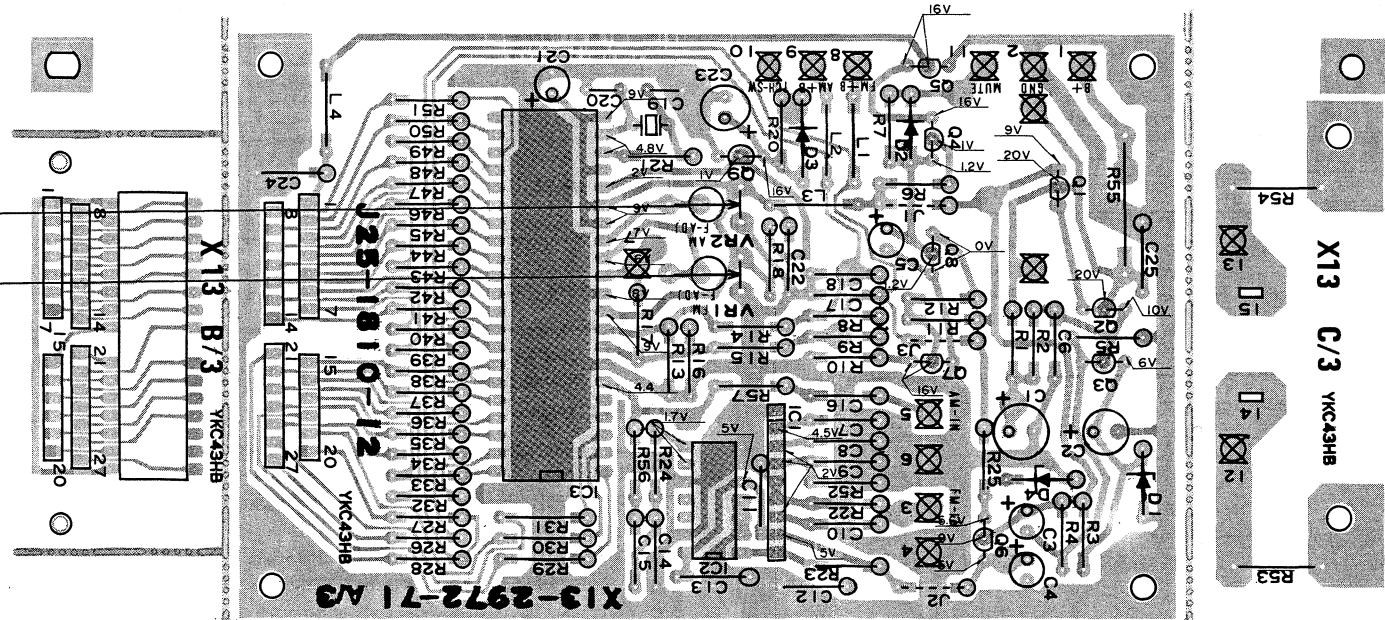
- 7. IFT
- (2) 1400kHz TRACKING
- (1) 600kHz
- 4. WIDE GAIN
- 2. FM T-METER
- 5. REC CAL

IC5,4	IC2,7	IC1	Q1
Q13,27,26,25,28,24	Q8,9	Q5	Q7,6,12
Q11	Q10	Q2,17	Q4
Q3,1C3,022,23,19,20,21,18	IC6	Q14,15,16	

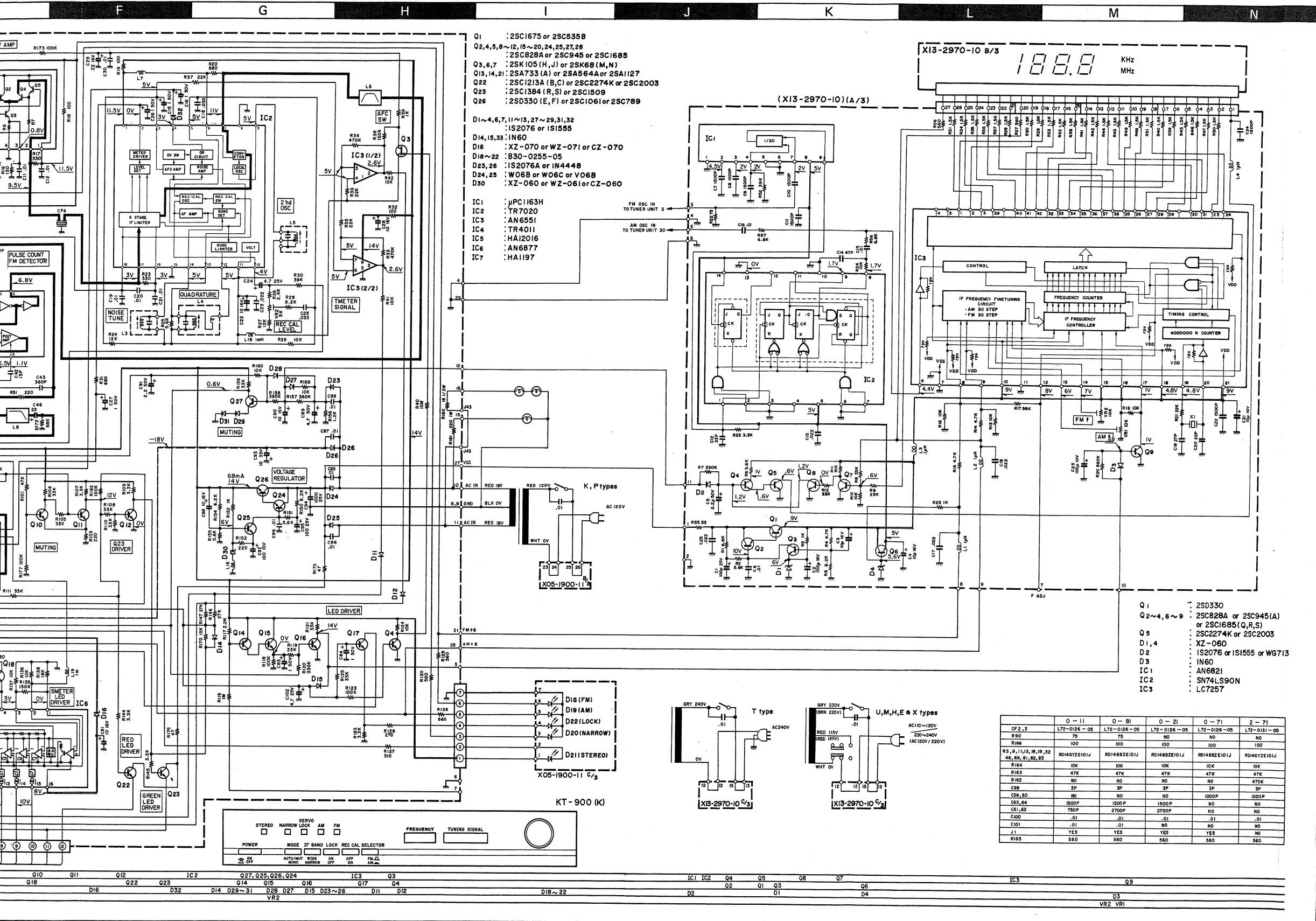
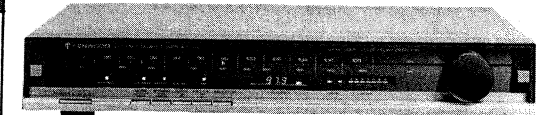
● : FM SIGNAL LINE
 ● : Signal
 ● : Control

SUB (X13-297*..*)
Component side view

- II. AM FREQUENCY COUNTER
- I. FM FREQUENCY COUNTER



Refer to the schematic diagram for the values of resistors and capacitors.



SPECIFICATIONS

FM TUNER SECTION

Usable sensitivity	10.8 dBf (1.9 μ V)
50 dB Quieting Sensitivity	
Mono	16.4 dBf (3.6 μ V)
Stereo	37.3 dBf (40 μ V)
Signal to Noise Ratio	
Mono	88 dB
Stereo	83 dB
Total Harmonic Distortion	WIDE
Mono	100 Hz : 0.03% 1,000 Hz : 0.03% 6,000 Hz : 0.05% 15,000 Hz : 0.05%
Stereo	100 Hz : 0.09% 1,000 Hz : 0.04% 6,000 Hz : 0.07% 15,000 Hz : 0.5%
Capture Ratio	1.0 dB
Alternate Channel	
Selectivity	45 dB
Stereo Separation	65 dB (300 kHz)
1,000 Hz	55 dB
50 ~ 10,000 Hz	45 dB
15,000 Hz	37 dB
Frequency Response	30 Hz to 15,000 Hz +0.2 dB, -0.8 dB
Spurious Response Ratio	120 dB
Image Response Ratio	90 dB
IF Response Ratio	100 dB
AM Suppression Ratio	70 dB
Sub Carrier Product Ratio	68 dB
Antenna Impedance	300 ohms balanced and 75 ohms unbalanced
FM Frequency Range	88 MHz to 108 MHz
Output Level (1,000 Hz 100% Mod.)	0.75V/1.8 kohms

AM TUNER SECTION

Usable Sensitivity	13 μ V
Signal to Noise Ratio	52 dB
Total Harmonic Distortion	0.4%
Image Rejection	45 dB
Selectivity	58 dB
Output Level (400 Hz 30% Mod.)	0.15V/2 kohms

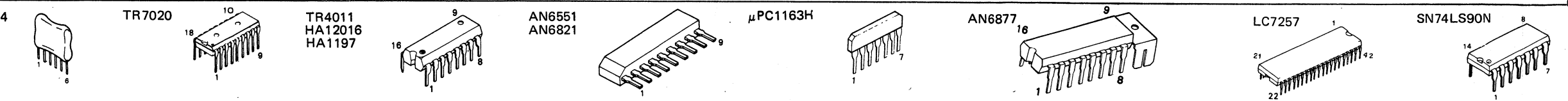
GENERAL

Power Requirements	60 Hz 120V (U.S.A. and Canada Model) or 50/60 Hz 110-120/220-240V switchable
Power Consumption	25W (IEC), 0.25A (UL and CSA)
Dimensions	W: 440 mm (17-5/16") H: 78 mm (3-1/16") D: 390 mm (15-11/32")
Weight (Net)	5.1 kg (11.2 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.



PARTS LIST

PARTS LIST

INSTRUCTION FOR PARTS LIST

Exploded view drawing No. Position in exploded view. Symbol of new parts. Area to which parts are shipped. Reference No. in schematic diagram. Abbreviation of "Flame-proof carbon film resistor".

- ① Exploded view drawing No.
② Position in exploded view.
③ Symbol of new parts.
④ Area to which parts are shipped.
⑤ Reference No. in schematic diagram.
⑥ Abbreviation of "Flame-proof carbon film resistor".
Abbreviations of capacitors (Parts No. with initial letter "C").
Abbreviations of resistors (Parts No. with initial letters "R").
Abbreviations common to capacitors and resistors.

Table with columns: Ref. No., Parts No., Description, Remarks. Includes sub-sections for KT-900 (UNIT) and various components like METALLIC CABINET, FRONT PANEL ASSY, DIAL BACK BOARD, etc.

Table with columns: Ref. No., Parts No., Description, Remarks. Includes components like POWER CORD, SLIDER, COILED SPRING, CARTON BOX, BAG, FOOT, HOLDER, MOUNTING HARDWARE, BUSHING, RAIL, KNOB, POWER TRANSFORMER, NUT, PUSH SWITCH, SLIDE SWITCH, PULLEY, AUDIO CORD, TERMINAL, POWER CORD.

Table with columns: Ref. No., Parts No., Description, Remarks. Includes sub-sections for ANTENNA AM LOOP, TUNER (X05-190), and various electronic components like TUNER PCB ASSY, LAMP (LED), CERAMIC, ELECTRO, MYLAR, etc.

Table with columns: Ref. No., Remarks. Lists reference numbers for various parts.

CODES in X05-190: K: X05-1900-11, U: X05-1900-81, M: X05-1900-21, E: X05-1902-71, X: X05-1900-71. CODES in X13-297: K: X13-2970-10, E: X13-2972-71.

PARTS LIST

Ref. No. 参照番号	Parts No. 部品番号	Description 部品名/規格	Re- marks 備考
22 2B	E30-0459-05	POWER CORD	E
22 2B	E30-0545-05	POWER CORD	UH
22 2B	E30-0545-05	POWER CORD	UE
22 2B	E30-0545-05	POWER CORD	H
22 2B	E30-0587-05	POWER CORD	T
22 2B	E30-0649-05	POWER CORD	X
23 2A	-	SLIDER	
24 1B	G01-0368-04	COILED SPRING	
-	H01-3213-04	CARTON BOX	*T
-	H01-3214-04	CARTON BOX	*U
-	H01-3214-04	CARTON BOX	MH
-	H01-3214-04	CARTON BOX	UE
-	H01-3214-04	CARTON BOX	X
-	H01-3216-04	CARTON BOX	*E
-	H01-3258-04	CARTON BOX	*P
-	H01-3258-04	CARTON BOX	*K
-	H10-1559-03	POLYSTYRENE FIXTURE	*
-	H20-0453-04	COVER	*
-	H25-0076-04	BAG	*
26 2A,3B	J02-0111-05	FOOT X4	*
27 2B	J19-0564-05	HOLDER	
28 3B		HOLDER	
29 1A		MOUNTING HARDWARE	
30 2B	J42-0083-05	BUSHING	KP
30 2B	J42-0083-05	BUSHING	UH
30 2B	J42-0083-05	BUSHING	H
30 2B	J42-0083-05	BUSHING	UE
30 2B	J42-0083-05	BUSHING	TE
30 2B	J42-0083-05	BUSHING	X
31 3A	-	RAIL	
32 3A	K21-0390-04	KNOB (TUNING)	*
33 2A	K29-0379-04	KNOB (SELECTOR)	*
34 1A	K29-0380-04	KNOB (POWER)	*
35 2A	L01-2151-05	POWER TRANSFORMER	*K
35 2A	L01-2151-05	POWER TRANSFORMER	P
35 2A	L01-2152-05	POWER TRANSFORMER	*T
35 2A	L01-2154-05	POWER TRANSFORMER	*E
35 2A	L01-2155-05	POWER TRANSFORMER	*U
35 2A	L01-2155-05	POWER TRANSFORMER	MH
35 2A	L01-2155-05	POWER TRANSFORMER	UE
35 2A	L01-2155-05	POWER TRANSFORMER	X
36 3A	N14-0128-04	NUT X2	*
S1	S40-1022-05	PUSH SWITCH	UH
S1	S40-1022-05	PUSH SWITCH	HX
S1	S40-1022-05	PUSH SWITCH	UE
S1	S40-1024-05	PUSH SWITCH	KP
S1	S40-1025-05	PUSH SWITCH	TE
S2	S31-2053-05	SLIDE SWITCH	UH
S2	S31-2053-05	SLIDE SWITCH	H
S2	S31-2053-05	SLIDE SWITCH	UE
S2	S31-2053-05	SLIDE SWITCH	XE
S3	S31-2007-05	SLIDE SWITCH	KP
S3	S31-2007-05	SLIDE SWITCH	UH
S3	S31-2007-05	SLIDE SWITCH	H
S3	S31-2007-05	SLIDE SWITCH	UE
-	T90-0202-05	ANTENNA FM	

Ref. No. 参照番号	Parts No. 部品番号	Description 部品名/規格	Re- marks 備考
38 2B	T90-0104-05	ANTENNA AM LOOP	
39 1A	X05-1900-11	TUNER PCB ASSY	*K
39 1A	X05-1900-11	TUNER PCB ASSY	P
39 1A	X05-1900-21	TUNER PCB ASSY	*H
39 1A	X05-1900-71	TUNER PCB ASSY	*X
39 1A	X05-1900-81	TUNER PCB ASSY	*U
39 1A	X05-1900-81	TUNER PCB ASSY	H
39 1A	X05-1900-81	TUNER PCB ASSY	UE
39 1A	X05-1902-71	TUNER PCB ASSY	*T
39 1A	X05-1902-71	TUNER PCB ASSY	E
40 2A	X13-2970-10	SUB PCB ASSY	KP
40 2A	X13-2972-71	SUB PCB ASSY	UH
40 2A	X13-2972-71	SUB PCB ASSY	HX
40 2A	X13-2972-71	SUB PCB ASSY	UE
40 2A	X13-2972-71	SUB PCB ASSY	XT
TUNER (X05-190 ***)			
D18 -22	B30-0255-05	LAMP (LED)	
C1 -7	C91-0083-05	CERAMIC 0.01UF N	
C8	C52-1710-26	CERAMIC 0.001UF K	
C9 -12	C91-0083-05	CERAMIC 0.01UF N	
C13	C91-0085-05	CERAMIC 0.022UF N	
C14	C25-1210-67	ELECTRO 10UF 16WV	
C15 ,16	C25-1710-57	LL-ELEC 1UF 50WV	
C17	C25-1747-47	LL-ELEC 0.47UF 50WV	
C18	C46-1733-35	MYLAR 0.033UF J	
C19 -21	C91-0083-05	CERAMIC 0.01UF N	
C22	C25-1210-67	ELECTRO 10UF 16WV	
C23	C91-0085-05	CERAMIC 0.022UF N	
C24	C24-1447-57	ELECTRO 4.7UF 25WV	
C25	C46-1733-35	MYLAR 0.033UF J	
C26 ,27	C25-1710-57	LL-ELEC 1UF 50WV	
C28	C25-1210-67	ELECTRO 10UF 16WV	
C29	C24-1222-67	ELECTRO 22UF 16WV	
C30	C91-0083-05	CERAMIC 0.01UF N	
C32	C24-1010-79	ELECTRO 100UF 10WV	
C33	C24-1022-71	ELECTRO 220UF 10WV	
C34	C91-0457-05	CERAMIC 0.022UF N	
C35	C58-1710-15	CERAMIC 100PF J	
C36 -38	C91-0085-05	CERAMIC 0.022UF N	
C39	C25-1210-77	LL-ELEC 100UF 16WV	
C40	C25-1210-67	ELECTRO 10UF 16WV	
C41	C46-1710-25	MYLAR 0.001UF J	XE
C42	C71-1715-06	CERAMIC 15PF J	
C43	C48-1736-15	POLYSTY 360PF J	
C44	C91-0085-05	CERAMIC 0.022UF N	
C45	C25-1210-77	LL-ELEC 100UF 16WV	
C46	C24-1222-67	ELECTRO 22UF 16WV	
C47	C46-1782-25	MYLAR 0.0082UF J	
C48	C26-1210-67	NP-ELEC 10UF 16WV	
C49	C46-1710-25	POLYSTY 1000PF J	
C50	C25-1710-57	LL-ELEC 1UF 50WV	
C51 ,52	C25-1433-57	LL-ELEC 3.3UF 25WV	
C53	C25-1722-57	LL-ELEC 2.2UF 50WV	
C54	C25-1210-77	LL-ELEC 100UF 16WV	
C55 ,56	C24-1247-61	ELECTRO 47UF 16WV	
C57 ,58	C24-1733-57	ELECTRO 3.3UF 50WV	
C59 ,60	C46-1710-25	MYLAR 0.001UF J	XE
C61 ,62	C46-1727-25	MYLAR 0.0027UF J	UH
C61 ,62	C46-1775-15	POLYSTY 750PF J	K
C63 ,64	C46-1715-25	MYLAR 0.0015UF J	KU
C63 ,64	C46-1715-25	MYLAR 0.0015UF J	M

PARTS LIST

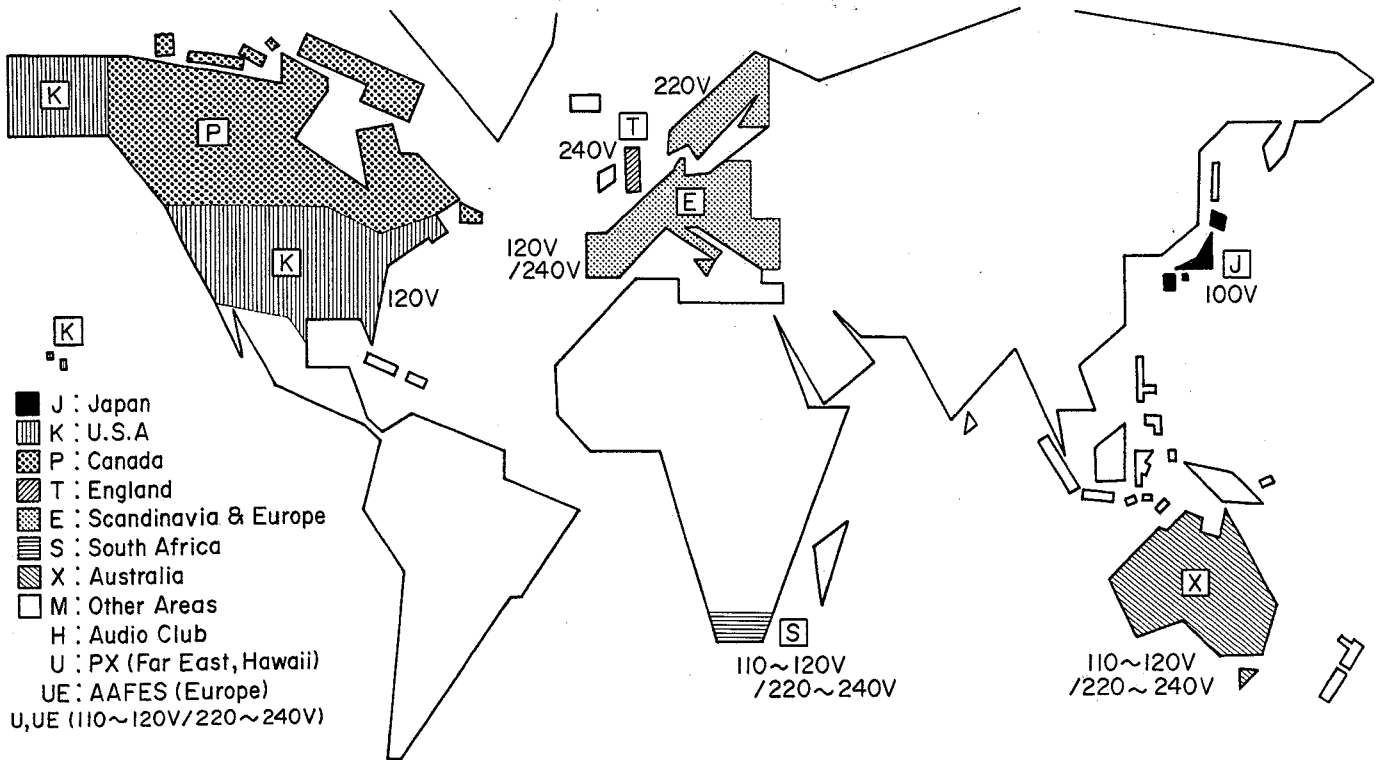
Ref. No. 参照番号	Parts No. 部品番号	Description 部品名/規格	Re- marks 備考
C65 ,66	C24-1722-57	ELECTRO 2.2UF 50WV	
C67 ,68	C91-0083-05	CERAMIC 0.01UF N	
C69	C25-1210-67	ELECTRO 10UF 16WV	
C70 -72	C91-0083-05	CERAMIC 0.01UF N	
C73	C25-1210-67	ELECTRO 10UF 16WV	
C74	C91-0083-05	CERAMIC 0.01UF N	
C75	C52-1710-26	CERAMIC 0.001UF K	
C76	C24-1447-57	ELECTRO 4.7UF 25WV	
C77	C25-1733-57	LL-ELEC 3.3UF 50WV	
C78 ,79	C55-1747-38	CERAMIC 0.047UF Z	
C80	C25-1747-47	LL-ELEC 0.47UF 50WV	
C81	C25-1210-67	LL-ELEC 10UF 16WV	
C83 ,84	C25-1710-57	LL-ELEC 1UF 50WV	
C85 -88	C91-0083-05	CERAMIC 0.01UF N	
C89	C25-1447-57	LL-ELEC 4.7UF 25WV	
C90	C25-1410-67	LL-ELEC 10UF 25WV	
C91	C25-1722-57	LL-ELEC 2.2UF 50WV	
C93	C25-6510-67	LL-ELEC 10UF 35WV	
C94	C24-1410-81	ELECTRO 1000UF 25WV	
C95	C24-1410-71	ELECTRO 100UF 25WV	
C96	C91-0083-05	CERAMIC 0.01UF N	
C98	C25-1210-67	ELECTRO 10UF 16WV	
C99	C71-1703-01	CERAMIC 3PF C	
C100,101	C91-0083-05	CERAMIC 0.01UF N	
C102	C24-1447-57	ELECTRO 4.7UF 25WV	
C103	C25-1210-77	LL-ELEC 100UF 16WV	
C104	C25-1722-47	LL-ELEC 0.22UF 50WV	
TC1 ,2	C05-0303-05	TRIMMER CAPACITOR	
CF1	L72-0111-05	CERAMIC FILTER	
CF1 -4	L79-0129-05	FILTER KIT	KU
CF1 -4	L79-0129-05	FILTER KIT	MX
CF1 -4	L79-0136-05	FILTER KIT	E
CF2 ,3	L72-0126-05	CERAMIC FILTER	KU
CF2 ,3	L72-0131-05	CERAMIC FILTER	MX
CF4	L72-0111-05	CERAMIC FILTER	E
CF5	L72-0082-05	CERAMIC FILTER	
L1	L19-0026-05	TRANSFORMER (BALUN)	
L2	L40-1092-11	INDUCTOR	
L3	L39-0089-05	COIL	
L4	L30-0320-05	IFT	
L5	L32-0252-05	OSCILLATING COIL	
L6	L79-0120-05	FILTER (BPF)	
L7	L40-2292-11	INDUCTOR	
L8	L79-0109-05	FILTER (LPF)	
L9 ,10	L79-0113-05	FILTER (LPF)	
L11	L31-0458-05	RF COIL	
L12	L32-0225-05	OSCILLATING COIL	
L13	L30-0337-05	IFT	
L14	L30-0284-05	IFT	
L15	L40-1021-03	INDUCTOR	
L16 ,17	L40-2292-11	INDUCTOR	
L18 ,19	L40-1021-11	INDUCTOR	
R3	R43-1210-15	FL-PROOF RD100 J 2E	
R9	R43-1210-15	FL-PROOF RD100 J 2E	
R11	R43-1210-15	FL-PROOF RD100 J 2E	
R13	R43-1210-15	FL-PROOF RD100 J 2E	
R18 ,19	R43-1210-15	FL-PROOF RD100 J 2E	
R32	R43-1210-15	FL-PROOF RD100 J 2E	
R40	R40-8310-67	RC 10M M 2H	
R46	R43-1210-15	FL-PROOF RD100 J 2E	
R69	R43-1210-15	FL-PROOF RD100 J 2E	

Ref. No. 参照番号	Parts No. 部品番号	Description 部品名/規格	Re- marks 備考
R74 ,75	R40-8310-67	RC 10M M 2H	
R81 -83	R43-1210-15	FL-PROOF RD100 J 2E	
R175,176	R40-8347-05	RC 47 J 2H	
R180	R40-8318-06	RC 18 J 2H	
R181	R47-5422-15	FL-PROOF RS220 J 3A	
VR1	R12-0302-05	TRIMMING POT,500	
VR2 ,3	R12-2302-05	TRIMMING POT,5K	
VP4	R12-3301-05	TRIMMING POT,20K	
VP5	R12-2302-05	TRIMMING POT,5K	
S1 -5	S42-5021-05	PUSH SWITCH (5KEY)	
D1 -7	V11-0271-05	1S2076	
D11 -13	V11-0271-05	1S2076	
D14 ,15	V11-0051-05	1N60	
D16	V11-4161-96	XZ-070	
D23	V11-0273-05	1S2076A	
D24 ,25	V11-0295-05	W06B	
D26	V11-0273-05	1S2076A	
D27 -29	V11-0271-05	1S2076	
D30	V11-4101-20	XZ-060	
D31 ,32	V11-0271-05	1S2076	
D33	V11-0051-05	1N60	
IC1	V30-0513-10	UPC1163H	
IC2	V30-0510-10	TR7020	
IC3	V30-0353-10	AN6551	
IC4	V30-0509-10	TR4011	
IC5	V30-0359-10	HA12016	
IC6	V30-0506-10	AN6877	
IC7	V30-0196-05	HA1197	
Q1	V03-1675-00	2SC1675	
Q2	V03-0504-05	2SC828A(Q)	
Q3	V09-0127-40	2SK105(H,J)	
Q4 ,5	V03-0504-05	2SC828A(Q)	
Q6 ,7	V09-0127-40	2SK105(H,J)	
Q8 -12	V03-0504-05	2SC828A(Q)	
Q13 ,14	V01-0733-90	2SA733(A)	
Q15 -20	V03-0504-05	2SC828A(Q)	
Q21	V01-0733-90	2SA733(A)	
Q22	V03-2274-20	2SC2274K(E,F)	
Q23	V03-1384-10	2SC1384(Q)	
Q24 ,25	V03-0504-05	2SC828A(Q)	
Q26	V04-0330-20	2SD330(E,F)	
Q27 ,28	V03-0504-05	2SC828A(Q)	
Q29	V03-0293-05	2SC945(Q)	
103 1A	W02-0054-05	FM FRONTEND	
SUB (X13-297 ***)			
104 2B	B38-0023-05	DISPLAY ASSY	*
C1	C24-1410-71	ELECTRO 100UF 25WV	
C2	C25-1210-77	LL-ELEC 100UF 16WV	
C3 ,4	C25-1210-67	LL-ELEC 10UF 16WV	
C5	C25-1722-57	LL-ELEC 2.2UF 50WV	
C6	C91-0083-05	CERAMIC 0.01UF N	
C7 -11	C91-0181-05	CERAMIC 0.0015UF N	
C12	C71-1733-06	CERAMIC 33PF K	
C13	C91-0085-05	CERAMIC 0.022UF N	
C14	C71-1747-05	CERAMIC 47PF J	
C15 ,16	C91-0083-05	CERAMIC 0.01UF N	
C17 ,18	C91-0085-05	CERAMIC 0.022UF N	
C19	C63-1727-05	CERAMIC 27PF J	
C20	C63-1722-05	CERAMIC 22PF J	
C21	C25-1210-67	LL-ELEC 10UF 16WV	

PARTS LIST

Ref. No. 参照番号	Parts No. 部品番号	Description 部品名 / 規格	Re- marks 備考
C22	C91-0181-05	CERAMIC 0.0015UF N	
E23	C24-1010-79	ELECTRO 100UF 10WV	
C24	C91-0181-05	CERAMIC 0.0015UF N	
C25	C91-0085-05	CERAMIC 0.022UF N	
L1 -4	L40-2291-11	INDUCTOR 1MH	
X1	L77-0574-05	CRYSTAL RESONATOR	
R53 ,54	R92-0173-05	RC 2.2M M 2H	
R55	R47-5533-05	FL-PROOF RS33 J 3D	
VR1 ,2	R12-3302-05	TRIMMING POT,10K	
D1	V11-4101-20	XZ-060	
D2	V11-0271-05	1S2076	
D3	V11-0051-05	1N60	
D4	V11-4101-20	XZ-060	
IC1	V30-0409-10	AN6821	
IC2	V30-1005-26	SN74LS90N	
IC3	V30-0517-10	LC7257	*
Q1	V04-0330-00	2SD330	
Q2 -4	V03-0504-05	2SC828A(Q)	
Q5	V03-2274-20	2SC2274K(E,F)	
Q6 -9	V03-0504-05	2SC828A(Q)	
FM FRONT END (W02-0054-05)			
D1	V11-3100-20	1S2236	
IC1	V30-0445-10	SC114	
Q1	V09-0150-05	3SK85	
Q2	V09-0124-20	2SK61	

WORLD MAP & AREA CODE



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.

There is no plan for producing units of S type.

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