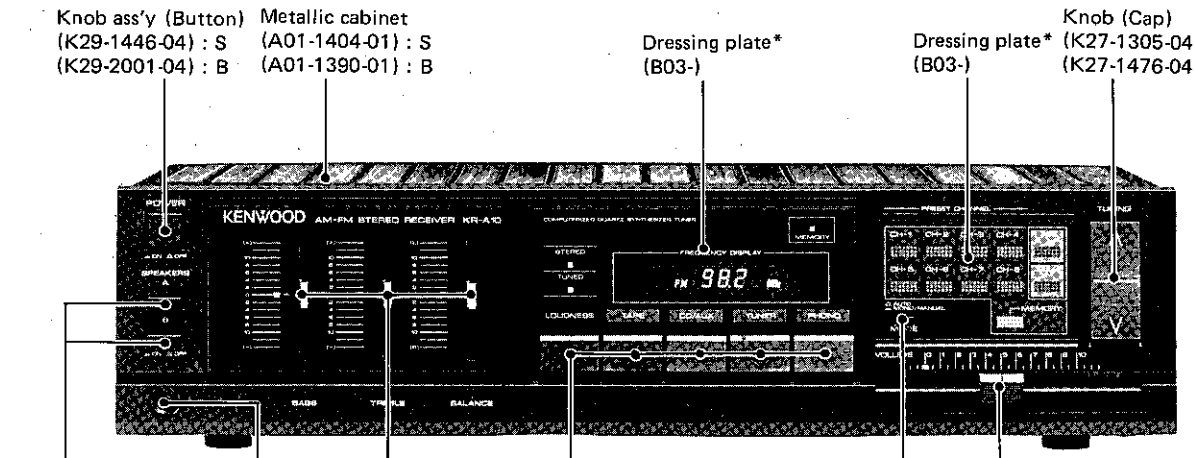
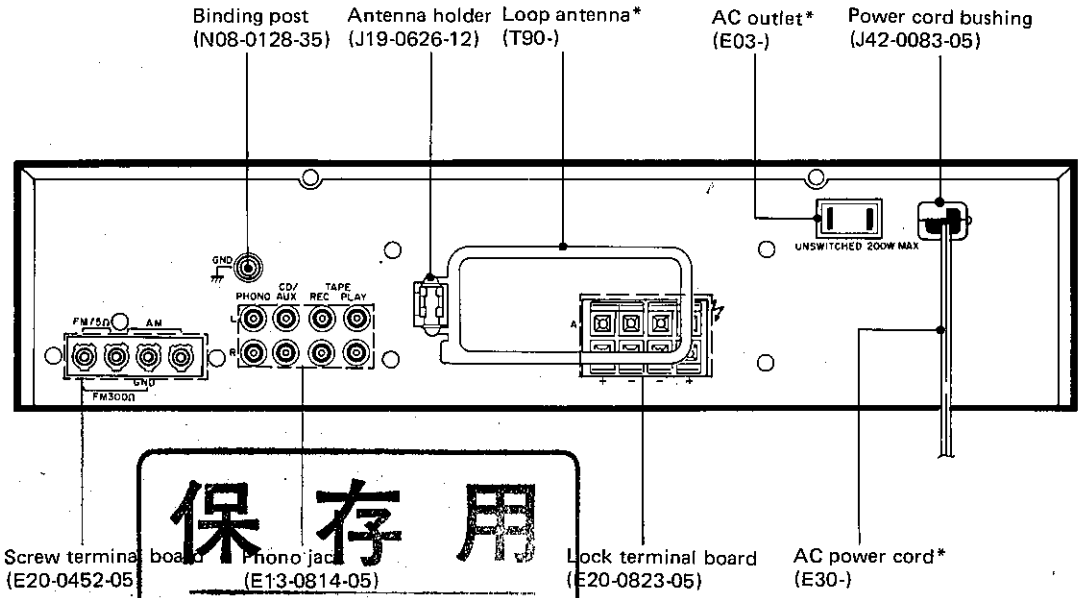
SERVICE MANUAL

KENWOOD

KR-A10

AM-FM STEREO RECEIVER





保存用

禁持出

*Refer to parts list on page 12.
Photo is KR-A10 (Black version).
S : Silver version.
B : Black version.

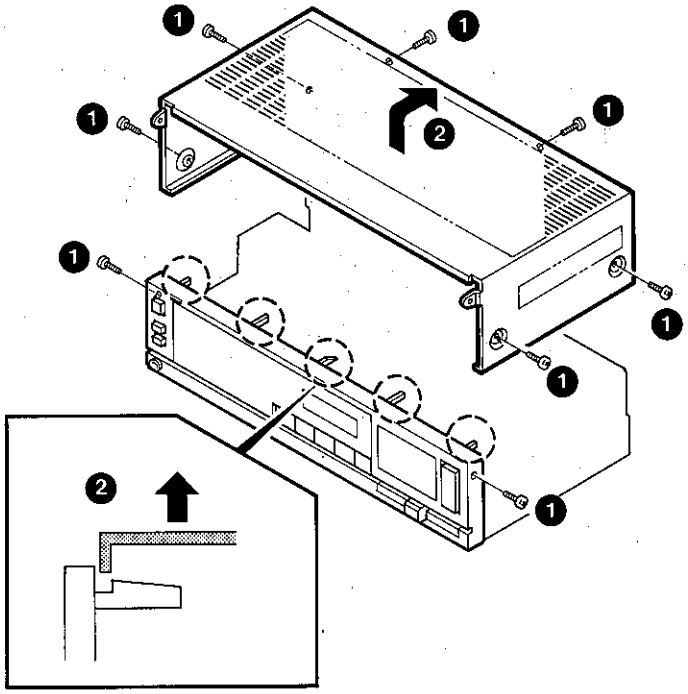
DISASSEMBLY FOR REPAIR

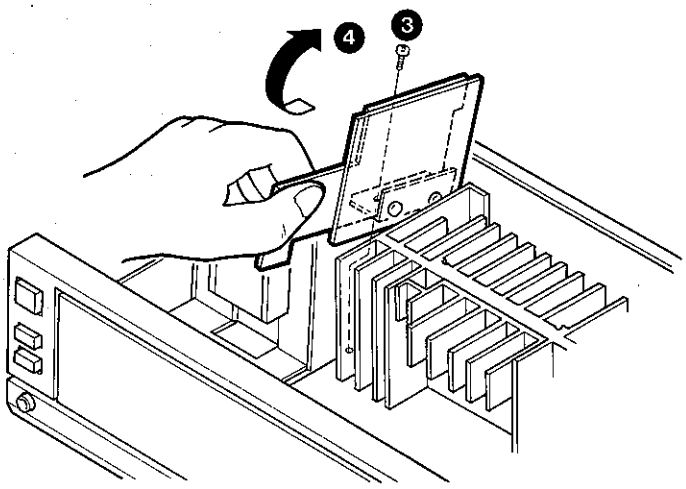
DISASSEMBLY FOR REPAIR

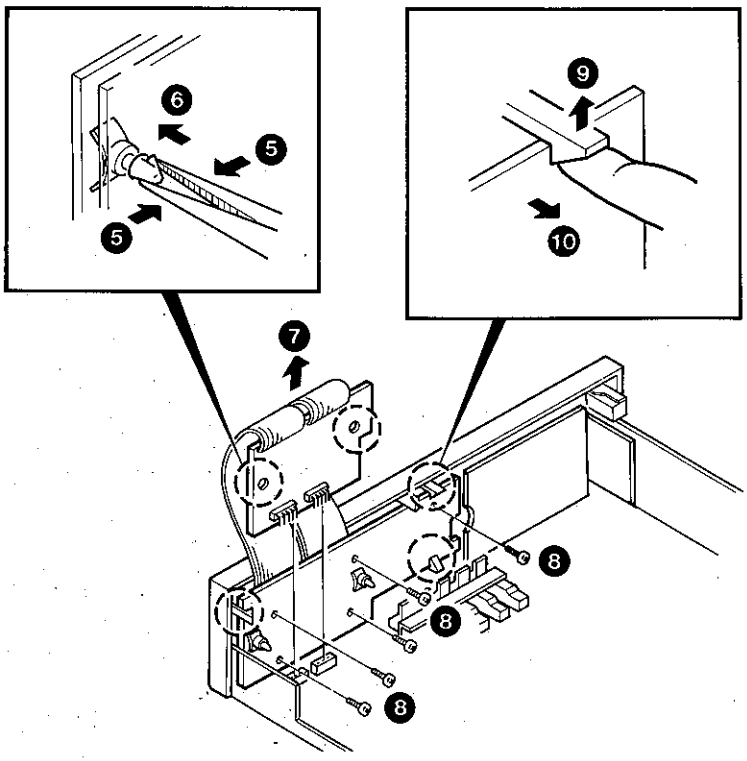
1. Remove 8 screws (❶) and remove the metallic cabinet (❷).

Note: Be aware that the metallic cabinet is hooked to the top of the front panel.

2. Remove 1 screw from the mounting hardware of the fuse pc board (❸).
3. Take the pc board up (❹). Now the fuse can be replaced.
4. To replace components on the switch pc board, first release the pc board from the unit holder first (❺ , ❻).
5. Pull the pc board up (❼) and remove 5 screws retaining the pc board (❽). Release the pc board from the pawls and take the pc board out from the front panel (❾ , ❿).

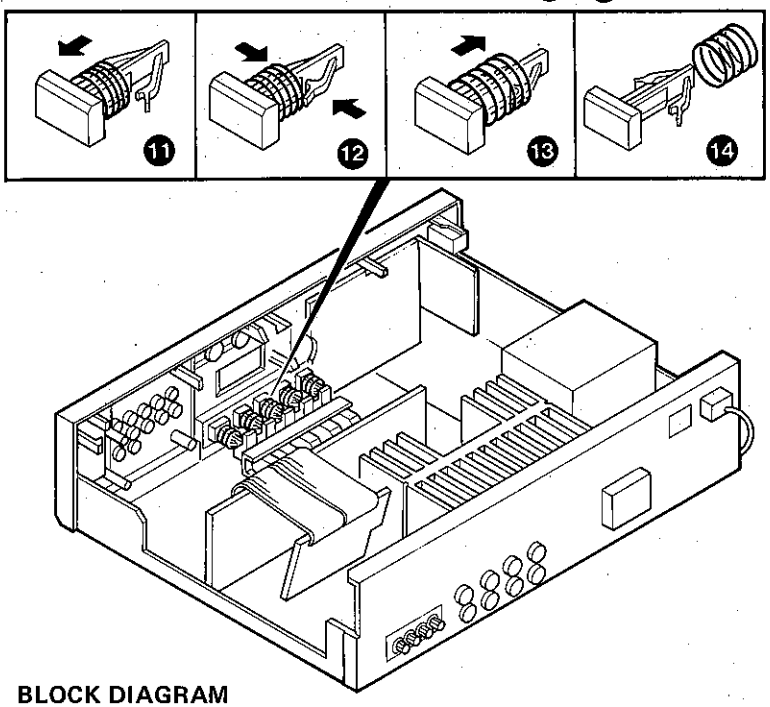




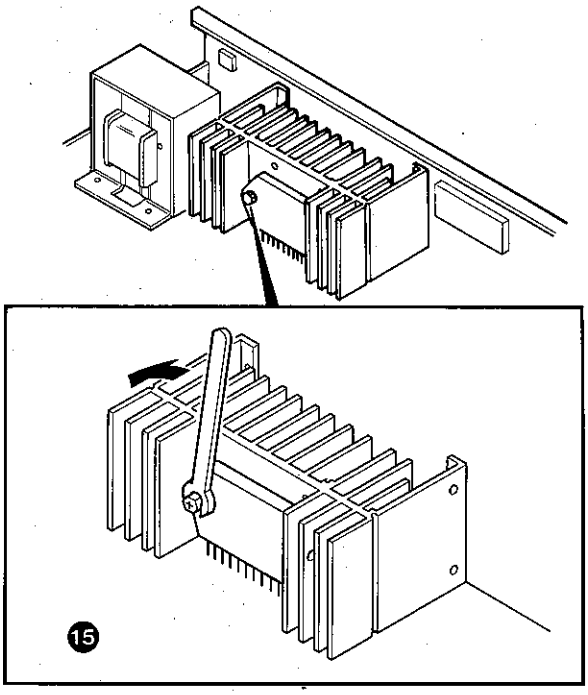


DISASSEMBLY FOR REPAIR/BLOCK DIAGRAM

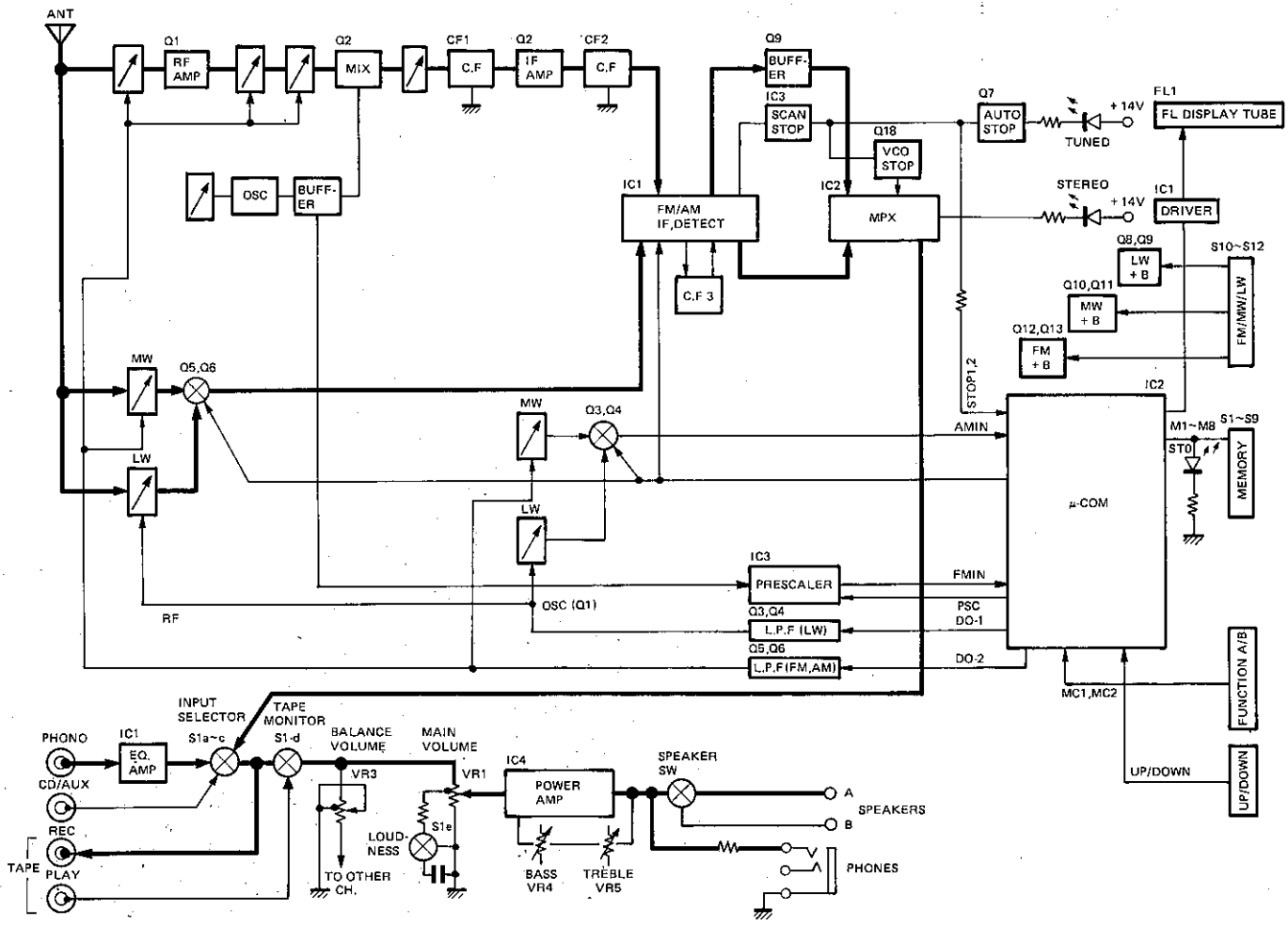
6. To remove the LOUDNESS, TAPE, CD/AUX, TUNER, PHONO knobs, follow the procedures as shown in the figure.
   Shorten the spring (⓫), lightly pinch the arms (⓬) and slip out the spring out from the shaft (⓭ , ⓮).



7. To remove the power IC from the heat sink, remove the screws retaining the power IC with the hex wrench (W05-0022-00) (⓯).



BLOCK DIAGRAM



CIRCUIT DESCRIPTION

SWITCHING IC (X13-4800-10)

Component	Function	Operation
IC1	Display	
IC2	Synthesizer control	See the service manual KR-A50 on page 8~.
Q1,Q2	0/5 indicator	For switching between 100kHz/50kHz display in FM mode. Only with E type and M type.
Q3,Q4	L.P.F for LW	
Q5,Q6	L.P.F for FM and LW	
Q7	TUNE lamp drive	Not provided with E type.
Q7,Q9	LW + B	For swithing + B in LW, MW and FM.
Q10,Q11	MW + B	
Q12,Q13	FM + B	

RECEIVER UNIT (X14-1740-10)

Component	Function	Operation
IC1	IF	
IC2	FM MPX IC	
IC3	Scan stop	
IC4	Power IC	One pack (class A & class B), power IC for both channels.
Q10,Q11	Protection	
Q12	Ripple filter	
Q13~Q15	AVR (+ 14V)	
Q16	AVR (+ 5V)	
Q1	AM OSC amplifier	
Q2	FM IF amplifier	
Q3,Q4	AM OSC switching	OSC switching in MW and LW.
Q5,Q6	AM ANT switching	ANT switching in MW and LW.
Q7	AM/FM switching	AM/FM switching of IC1.
Q8	AM/FM scan switching	Switching of the S meter's time constant during auto scanning in AM and FM.
Q9	IF (Audio) amplifier	1-transistor amplifier added to process DET OUT with low level.

FRONT END (X86-1010-10)

Component	Function	Operation
Q1	RF amplifier	
Q2	Mixer	
Q3	OSC buffer amplifier	E type only
Q4	OSC	

CIRCUIT DESCRIPTION

Stop signal detection circuit

Block explanations

① Bias setting circuit
Compares its voltage with that of IC's pin 8 and make the potentials at 44 and 45 the same. (Matching of the maximum point of distortion.)

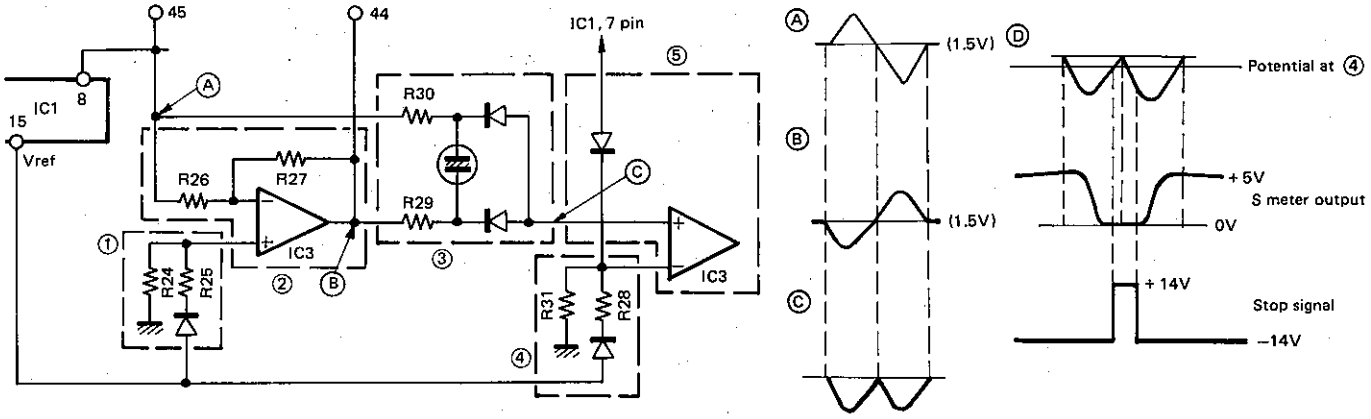
② Inverter amplifier
0dB inverter amplifier for M conversion.

③ M converter circuit
Converts the discrets S curve into M curve.

④ Band width setting circuit
Determines the bandwidth according to the potential here.

⑤ AND circuit with S meter
Outputs an output only when S exists and discrete output is 0.

With the detector output S curve Ⓐ , the inverter output is as shown by Ⓑ , which becomes Ⓒ after the M conversion of ③ . When this Ⓒ is ANDed with the S meter output, the relation is as shown by Ⓓ : The output becomes "H" with narrow band. This signal is used as the stop signal.

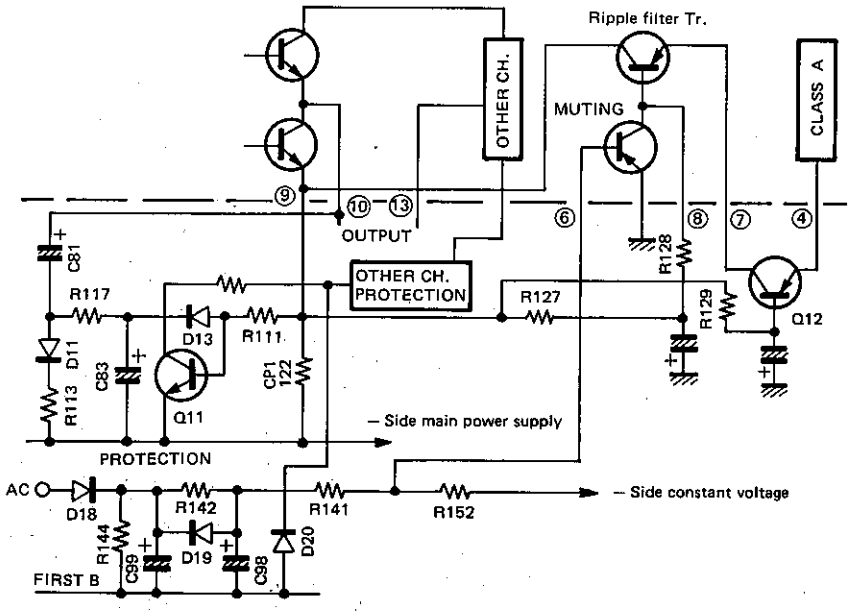


Power ON/OFF muting and protection circuit

The power ICs (STK4141, STK4151, STK4171) incorporate muting and ripple filter transistors. The muting transistors is turned ON/OFF based on the balance between the fast B circuit and negative-side constant voltage, and the amp's class A negative-side current is turned ON/OFF by the ripple filter so that muting is performed when the Power switch is switched ON or OFF. Q12 is provided to decrease the ripple of the power supply for the class A common emitter.

Protection : The amp output is output from IC's pins 10 and 13 (L CH and R CH). When the speakers are muted, the voltages applied on both sides of CD1 turn Q11 and Q12 ON, bring fast B to negative and perform muting.

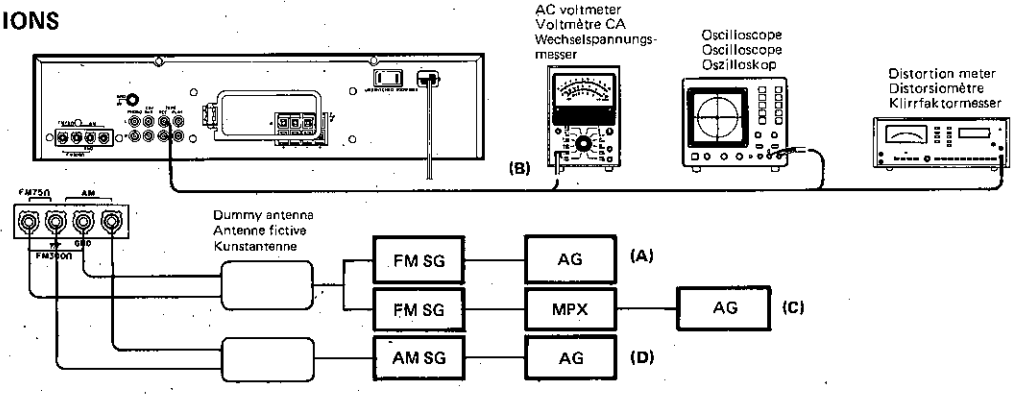
With the bootstrap circuit of C81, C82, R117, R118, R113 and R114, the protection is performed less easily when the output voltage is high.



ADJUSTMENT

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	TUNER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
FM SECTION		Unless otherwise specified, the individual switches should be set as following: SELECTOR: FM MODE: AUTO					
1	BAND EDGE (1)	—	Connect a DC voltmeter between TP72 and TP73.	87.5MHz	(X86-1010) L8	2.5V	(a)
2	BAND EDGE (2)	—	Connect a DC voltmeter between TP72 and TP73.	108MHz	(X86-1010) TC1	8.0V	(a)
		Repeat alignments 1 and 2 several times.					
3	RF ALIGNMENT	(A) 98.0MHz 1kHz,±75kHz dev	(B)	MODE: MONO 98.0MHz	(X86-1010) L2,4 (L5)	Maximum amplitude and symmetry of the oscilloscope display.	
4	DISCRIMINATOR	(A) 98.0MHz 1kHz,±75kHz dev 60dB(ANT input)	Connect a DC voltmeter between TP44 and TP45.	MODE: MONO 98.0MHz	(X14-174) T1	0V	(b)
5	VCO	(A) 98.0MHz 0 dev 60dB(ANT input)	Connect a 330kΩ resistor to TP43. Connect a frequency counter to the resistor via an AC voltmeter.	98.0MHz	(X14-174) VR1	76.00kHz	(c)
6	DISTORTION (STEREO)	(C) 98.0MHz 1kHz,±68.25kHz dev Selector:L or R Pilot: ±6.75kHz dev 60dB(ANT input)	(B)	98.0MHz	(X86-1010) L7	Minimum distortion.	
AM-MW SECTION			Keep the AM loop antenna installed.	SELECTOR: AM			
(1)	BAND EDGE (1)	—	Connect a DC voltmeter between TP72 and 73.	520kHz (522kHz)	(X14-174) L2	1.5V	(a)
(2)	BAND EDGE (2)	—	Connect a DC voltmeter between TP72 and 73.	1600kHz (1602kHz)	(X14-174) TC2	8.0V	(a)
		Repeat alignments (1) and (2) several times.					
(3)	RF ALIGNMENT (1)	(D) 600kHz 400Hz,30% mod	(B)	600kHz	(X14-174) L4	Maximum amplitude and symmetry of the oscilloscope display.	
(4)	RF ALIGNMENT (2)	(D) 1400kHz 400Hz,30% mod	(B)	1400kHz	(X14-174) TC4	Maximum amplitude and symmetry of the oscilloscope display.	
		Repeat alignments (3) and (4) several times.					
AM-LW SECTION			Keep the AM loop antenna installed.	SELECTOR: LW			
(5)	BAND EDGE (1)	—	Connect a DC voltmeter between TP71 and 72.	153kHz	(X14-174) L3	1.5V	(d)
(6)	BAND EDGE (2)	—	Connect a DC voltmeter between TP71 and 72.	281kHz	(X14-174) TC3	8.0V	(d)
		Repeat alignments (5) and (6) several times.					
(7)	RF ALIGNMENT (1)	(D) 164kHz 400Hz,30% mod	(B)	164kHz	(X14-174) L1	Maximum amplitude and symmetry of the oscilloscope display.	
(8)	RF ALIGNMENT (2)	(D) 270kHz 400Hz,30% mod	(B)	270kHz	(X14-174) TC1	Maximum amplitude and symmetry of the oscilloscope display.	
		Repeat alignments (7) and (8) several times.					

SYSTEM CONNECTIONS

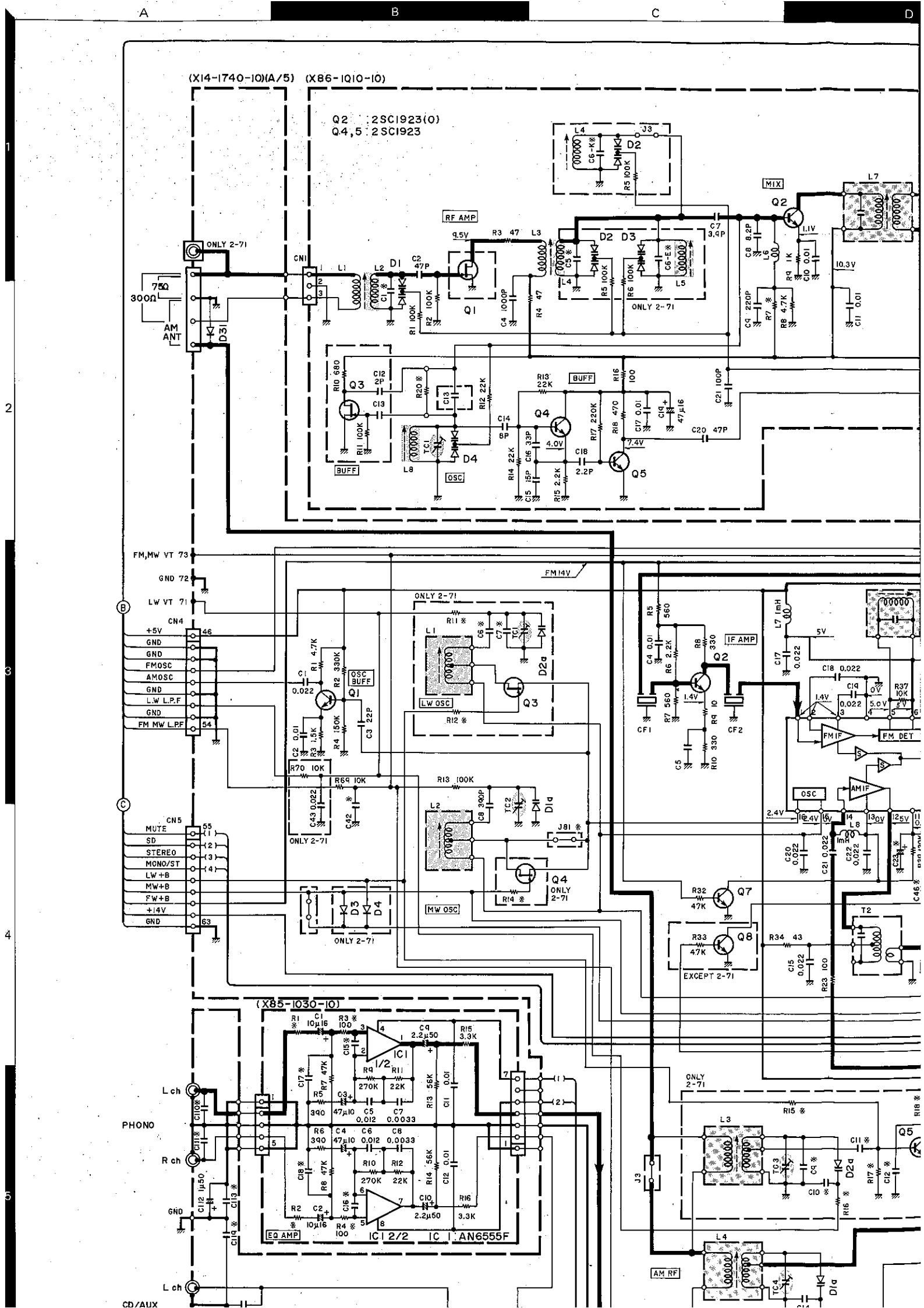


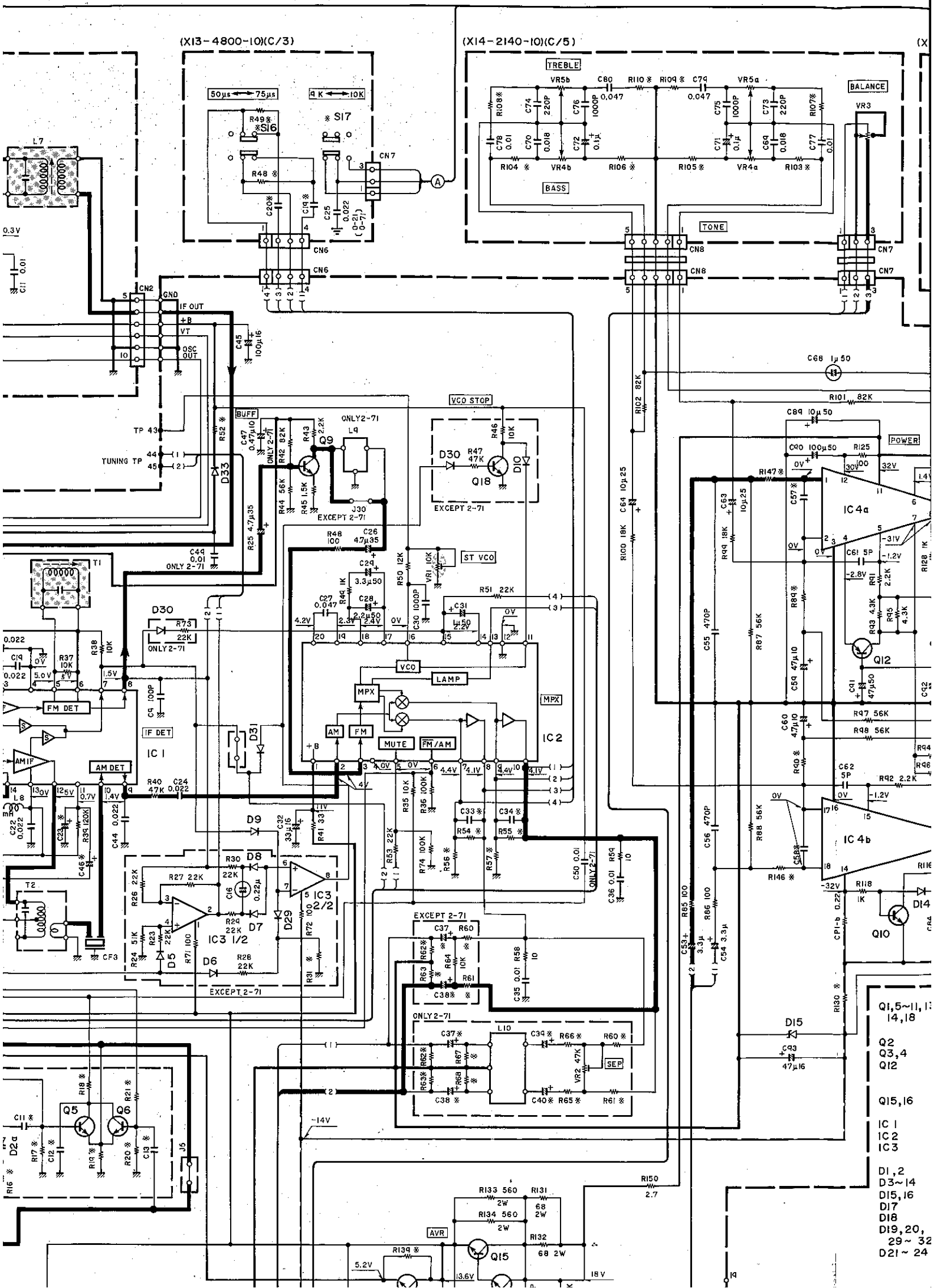
REGLAGE

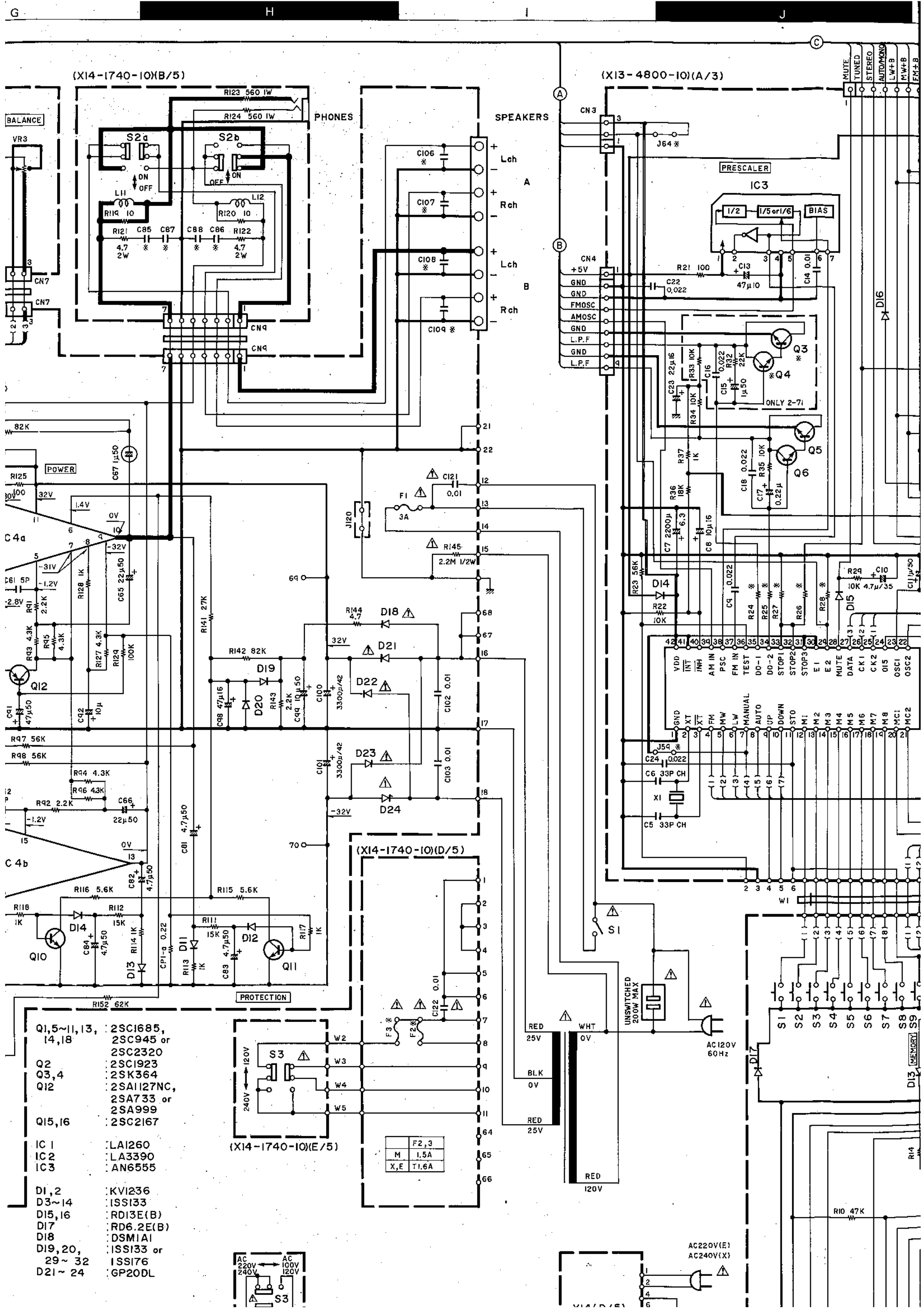
N°	ITEM	REGLAGE DE L'ENTREE	REGLAGE DE LA SORTIE	REGLAGE DU TUNER	POINT DE L'ALIGNEMENT	ALIGNER POUR	FIG.
SECTION MF		Sauf en cas d'indications spéciales, régler chaque commutateur comme suit: SELECTEOR: FM MODE: AUTO					
1	BORD DE BANDE (1)	—	Connecter un voltmètre CC entre les TP72 et 73.	87,5MHz	(X86-1010) L8	2,5V	(a)
2	BORD DE BANDE (2)	—	Connecter un voltmètre CC entre les TP72 et 73.	108MHz	(X86-1010) TC1	8,0V	(a)
		Répéter les points 1 et 2 plusieurs fois.					
3	ALIGNEMENT HT	(A) 98,0MHz 1kHz.±75kHz dév	(B)	MODE: MONO 98,0MHz	(X86-1010) L2,4 (L5)	Amplitude et symétrie maximale de l'affichage de l'oscilloscope.	
4	DISCRIMINATEUR	(A) 98,0MHz 1kHz.±75kHz dév 60dB(Entrée ANT)	Connecter un voltmètre CC entre les TP44 et 45.	MODE: MONO 98,0MHz	(X14-174) T1	0 V	(b)
5	VCO	(A) 98,0MHz 0 dév 60dB(Entrée ANT)	Connecter une résistance de 330kΩ à TP43. Raccorder un compteur de fréquence à une résistance par l'intèrmediaire d'un voltmètre CA.	98,0MHz	(X14-174) VR1	76,00kHz	(c)
6	DISTORSION (STEREO)	(C) 98,0MHz 1kHz.±68,25kHz dév Selection:L ou R Signal pilote: ±6,75kHz dév 60dB(Entrée ANT)	(B)	98,0MHz	(X86-1010) L7	Distorsion minimale.	
SECTION MA-OM			Laisser l'antenne bouche MA installée. SELECTEOR: AM				
(1)	BORD DE BANDE	—	Connecter un voltmètre CC entre les TP72 et 73.	520kHz (522kHz)	(X14-174) L2	1,5V	(a)
(2)	BORD DE BANDE	—	Connecter un voltmètre CC entre les TP72 et 73.	1600kHz (1602kHz)	(X14-174) TC2	8,0V	(a)
		Répéter les points (1) et (2) plusieurs fois.					
(3)	ALIGNEMENT HT (1)	(D) 600kHz 400Hz.30% mod	(B)	600kHz	(X14-174) L4	Amplitude et symétrie maximale de l'affichage de l'oscilloscope.	
(4)	ALIGNEMENT HT (2)	(D) 1400kHz 400Hz.30% mod	(B)	1400kHz	(X14-174) TC4	Amplitude et symétrie maximale de l'affichage de l'oscilloscope.	
		Répéter les points (3) et (4) plusieurs fois.					
SECTION MA-OL			Laisser l'antenne bouche MA installée. SELECTEOR: LW				
(5)	BOAD DE BANDE (1)	—	Connecter un voltmètre CC entre les TP71 et 72.	153kHz	(X14-174) L3	1,5V	(d)
(6)	BOAD DE BANDE (2)	—	Connecter un voltmètre CC entre les TP71 et 72.	281kHz	(X14-174) TC3	8,0V	(d)
		Répéter les points (5) et (6) plusieurs fois.					
(7)	ALIGNEMENT HT (1)	(D) 164kHz 400Hz.30% mod	(B)	164kHz	(X14-174) L1	Amplitude et symétrie maximale de l'affichage de l'oscilloscope.	
(8)	ALIGNEMENT HT (2)	(D) 270kHz 400Hz.30% mod	(B)	270kHz	(X14-174) TC1	Amplitude et symétrie maximale de l'affichage de l'oscilloscope.	
		Répéter les points (7) et (8) plusieurs fois.					

ABGLEICH

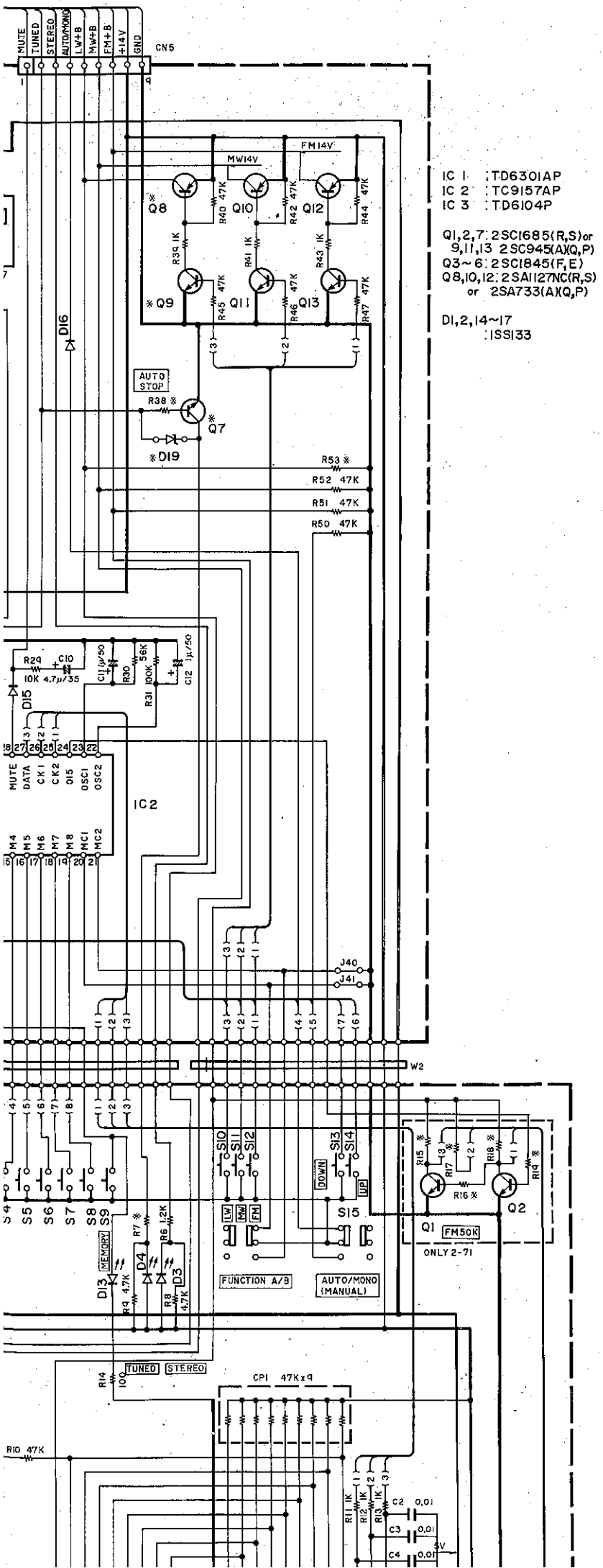
NR.	GEGENSTAND	EINGANGS-EINSTELLUNG	AUSGANGS-EINSTELLUNG	TUNER-EINSTELLUNG	ABGLEICH-PUNKTE	ABGLEICHEN FÜR	ABB.
UKW-EMPFANGSABTEILUNG		Außer wenn anders angegeben, die verschiedenen Schalter wie folgt einstellen: SELECTOR: FM MODE: AUTO					
1	BANDKANTE (1)	–	Einen Gleichspannungsmesser zwischen TP72 und 73 anschließen.	87,5MHz	(X86-1010) L8	2,5V	(a)
2	BANDKANTE (2)	–	Einen Gleichspannungsmesser zwischen TP72 und 73 anschließen.	108MHz	(X86-1010) TC1	8,0V	(a)
		Abstimmungen 1 und 2 mehrere Male wiederholen.					
3	EMPFANGS-BEREICH-ABSTIMMUNGEN	(A) 98,0MHz 1kHz, ±75kHz Hub	(B)	MODE: MONO 98,0MHz	(X86-1010) L2,4 (L5)	Maximal Amplitude und Symmetrie des Oszilloskopbildes.	
4	DISKRIMINATOR	(A) 98,0MHz 1kHz, ±75kHz Hub 60dB(ANT-Eingang)	Einen Gleichspannungsmesser zwischen TP44 und 45 anschließen.	MODE: MONO 98,0MHz	(X14-174) T1	0 V	(b)
5	SPANNUNGS-GEREGELTER OSZILLATOR	(A) 98,0MHz 0 Hub 60dB(ANT-Eingang)	Einen 330kΩ Widerstanden zu TP43 anschließen. Einen Frequenzzähler über einen Wechselspannungsmesser an den Widerstand anschließen.	98,0MHz	(X14-174) VR1	76,00kHz	(c)
6	KLIRRFAKTOR (STEREO)	(C) 98,0MHz 1kHz, ±88,25kHz Hub Wähler: L oder R Pilotten: ±6,75kHz Hub 60dB(ANT-Eingang)	(B)	98,0MHz	(X86-1010) L7	Minimal Klirrfaktor.	
MW-EMPFANGSABTEILUNG		Die MW-Rahmenantenne angebracht lassen. SELECTOR: AM					
(1)	BANDKANTE (1)	–	Einen Gleichspannungsmesser zwischen TP72 und 73 anschließen.	520kHz (522kHz)	(X14-174) L2	1.5V	(a)
(2)	BANDKANTE (2)	–	Einen Gleichspannungsmesser zwischen TP72 und 73 anschließen.	1600kHz (1602kHz)	(X14-174) TC2	8.0V	(a)
		Abstimmungen (1) und (2) mehrere Male wiederholen.					
(3)	HF-ABGLEICH (1)	(D) 600kHz 400Hz, 30% mod	(B)	600kHz	(X14-174) L4	Maximal Amplitude und Symmetrie des Oszilloskopbildes.	
(4)	HF-ABGLEICH (2)	(D) 1400kHz 400Hz, 30% mod	(B)	1400kHz	(X14-174) TC4	Maximal Amplitude und Symmetrie des Oszilloskopbildes.	
		Abstimmungen (3) und (4) mehrere Male wiederholen.					
LW-EMPFANGSABTEILUNG		Die MW-Rahmenantenne angebracht lassen. SELECTOR: LW					
(5)	BANDKANTE (1)	–	Einen Gleichspannungsmesser zwischen TP71 und 72 anschließen.	153kHz	(X14-174) L3	1.5V	(d)
(6)	BANDKANTE (2)	–	Einen Gleichspannungsmesser zwischen TP71 und 72 anschließen.	281kHz	(X14-174) TC3	8.0V	(d)
		Abstimmungen (5) und (6) mehrere Male wiederholen.					
(7)	HF-ABGLEICH (1)	(D) 164kHz 400Hz, 30% mod	(B)	164kHz	(X14-174) L1	Maximal Amplitude und Symmetrie des Oszilloskopbildes.	
(8)	HF-ABGLEICH (2)	(D) 270kHz 400Hz, 30% mod	(B)	270kHz	(X14-174) TC1	Maximal Amplitude und Symmetrie des Oszilloskopbildes.	
		Abstimmungen (7) und (8) mehrere Male wiederholen.					


(X14-1740-10)(A/5)
(X86-1010-10)
Q2 : 2SC1923(O)
Q4,5 : 2SC1923
ONLY 2-71
75Ω
300Ω
AM ANT
D31
CN1
L1
L2
D1
C2 47P
RF AMP
9.5V
R3 47
L3
Q1
R1 100K
R2 100K
C4 1000P
R4 47
D2 D3
C5 *
C5-E *
L4
L5
R5 100K
R6 100K
MIX
Q2
1.1V
C7 3.9P
C8 8.2P
L6
R9 1K
C10 0.01
L7
10.3V
C9 220P
R7 *
R8 4.7K
C11 0.01
D2
C6-K *
R5 100K
Q3
R10 680
C12 2P
C13
R20 *
R11 100K
R12 22K
BUFF
R13 22K
R16 100
C21 100P
C14 8P
Q4
4.0V
R17 220K
R18 470
C17 0.01
C19 47µ16
C20 47P
C16 33P
C15 15P
R14 22K
R15 2.2K
C18 2.2P
Q5
7.4V
TC1
D4
L8
OSC
FM,MW VT 73
GND 72
LW VT 71
CN4
+5V 46
GND
GND
FMOSC
AMOSC
GND
L.W L.P.F
GND
FM MW L.P.F 54
FM14V
ONLY 2-71
L1
C6 *
C7 *
TC1
D2a
Q3
LW OSC
R12 *
R11 *
OSC BUFF
Q1
R1 4.7K
R2 330K
C1 0.022
C3 22P
C2 0.01
R3 1.5K
R4 150K
R70 10K
R69 10K
C43 0.022
C42 *
R13 100K
L2
C8 390P
TC2
D1a
J81 *
Q4
ONLY 2-71
R14 *
MW OSC
D3
D4
ONLY 2-71
CN5
MUTE 55 (1)
SD (2)
STEREO (3)
MONO/ST (4)
LW +B
MW+B
FW+B
+14V
GND 63
R5 560
C4 0.01
R6 2.2K
R8 330
IF AMP
Q2
CF1
CF2
R7 560
R9 10
R10 330
C5
L7 1mH
5V
C17 0.022
C18 0.022
C19 0.022
R37 10K
1.4V
5.0V
FM IF
FM DET
AM IF
OSC
2.4V
L8 1mH
C20 0.022
C21 0.022
C22 0.022
C23 *
R32 47K
Q7
R33 47K
Q8
EXCEPT 2-71
R34 43
T2
C15 0.022
R23 100
(X85-1030-10)
R1 *
C1 10µ16
R3 100
C9 2.2µ50
R15 3.3K
IC1 1/2
C15 *
R9 270K
R11 22K
C17 *
R7 47K
R5 390
C3 47µ10
C5 0.012
C7 0.0033
R13 56K
C11 0.01
R6 390
C4 47µ10
C6 0.012
C8 0.0033
R10 270K
R12 22K
C18 *
R8 47K
R14 56K
C12 0.01
C16 *
C10 2.2µ50
R16 3.3K
R2 *
C2 10µ16
R4 100
EQ AMP
IC 2/2 IC : AN6555F
L ch
PHONO
R ch
GND
C112 1µ50
C113 *
C114 *
L ch
CD/AUX
ONLY 2-71
R15 *
L3
C11 *
Q5
TC3
C9 *
D2a
C10 *
R17 *
C12 *
R16 *
J3
AM RF
L4
TC4
D1a


(X13-4800-10)(C/3)
(X14-2140-10)(C/5)
TREBLE
BASS
BALANCE
TONE
VR5b
VR5a
VR4b
VR4a
VR3
50μs ⟷ 75μs
9K ⟷ 10K
SI6
SI7
CN2
CN6
CN7
CN8
GND
IF OUT
+B
VT
OSC OUT
TP 43
TUNING TP
VCO STOP
BUFF
ONLY 2-71
EXCEPT 2-71
ST VCO
VCO
LAMP
MPX
AM
FM
MUTE
FM/AM
FM DET
IF DET
AM DET
AMIF
POWER
IC 1
IC 2
IC3 1/2
IC3 2/2
IC 4a
IC 4b
SEP
AVR
Q1,5~11,13
14,18
Q2
Q3,4
Q12
Q15,16
IC 1
IC 2
IC 3
D1,2
D3~14
D15,16
D17
D18
D19,20,
29~32
D21~24



Q1,5~11,13, 14,18	2SC1685, 2SC945 or 2SC2320
Q2	2SC1923
Q3,4	2SK364
Q12	2SA1127NC, 2SA733 or 2SA999
Q15,16	2SC2167
IC 1	LA1260
IC2	LA3390
IC3	AN6555
D1,2	KV1236
D3~14	1SS133
D15,16	RD13E(B)
D17	RD6.2E(B)
D18	DSM1A1
D19,20, 29~32	1SS133 or 1SS176
D21~24	GP20DL

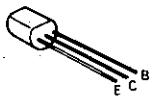


IC 1 : TD6301AP
IC 2 : TC9157AP
IC 3 : TD6104P

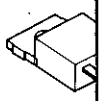
Q1,2,7: 2SC1685(R,S)or
9,11,13 2SC945(A)(Q,P)
Q3~6: 2SC1845(F,E)
Q8,10,12: 2SA1127NC(R,S)
or 2SA733(A)(Q,P)

D1,2,14~17
: 1SS133

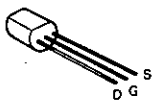
2SA1127NC
2SA733
2SA999
2SC1685
2SC1923
2SC2320
2SC945



2SC2167

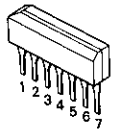


2SK364

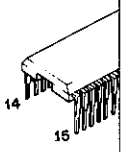


2SK161
2SK241

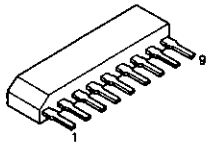
TD6104P



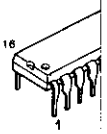
TD6301AP



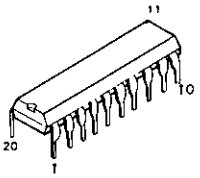
AN6555



LA1260

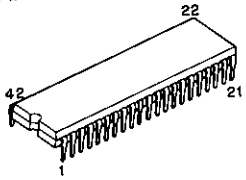


LA3390

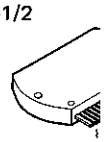


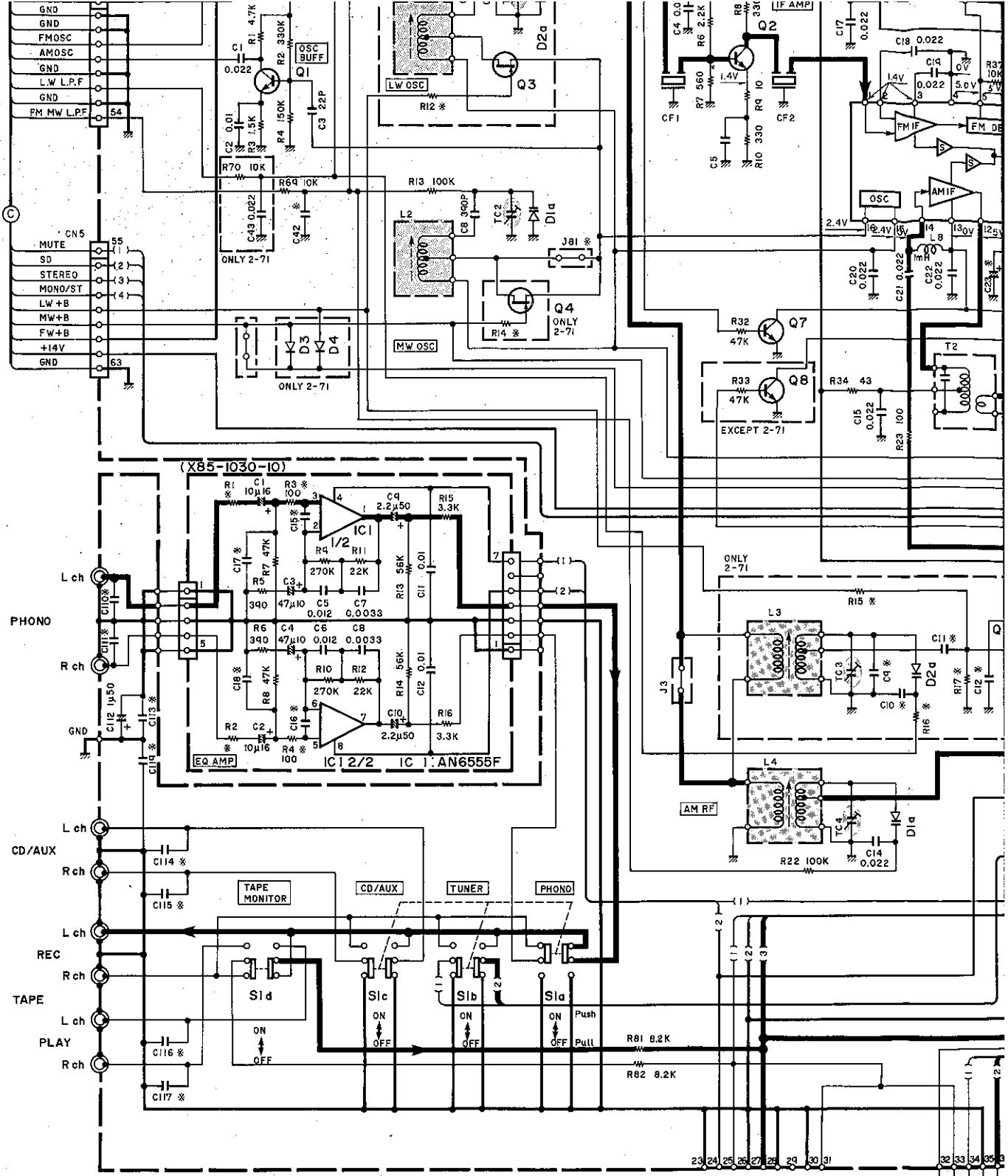
AN6556
M5218P

TC9157AP



STK4141/2
STK4151/2



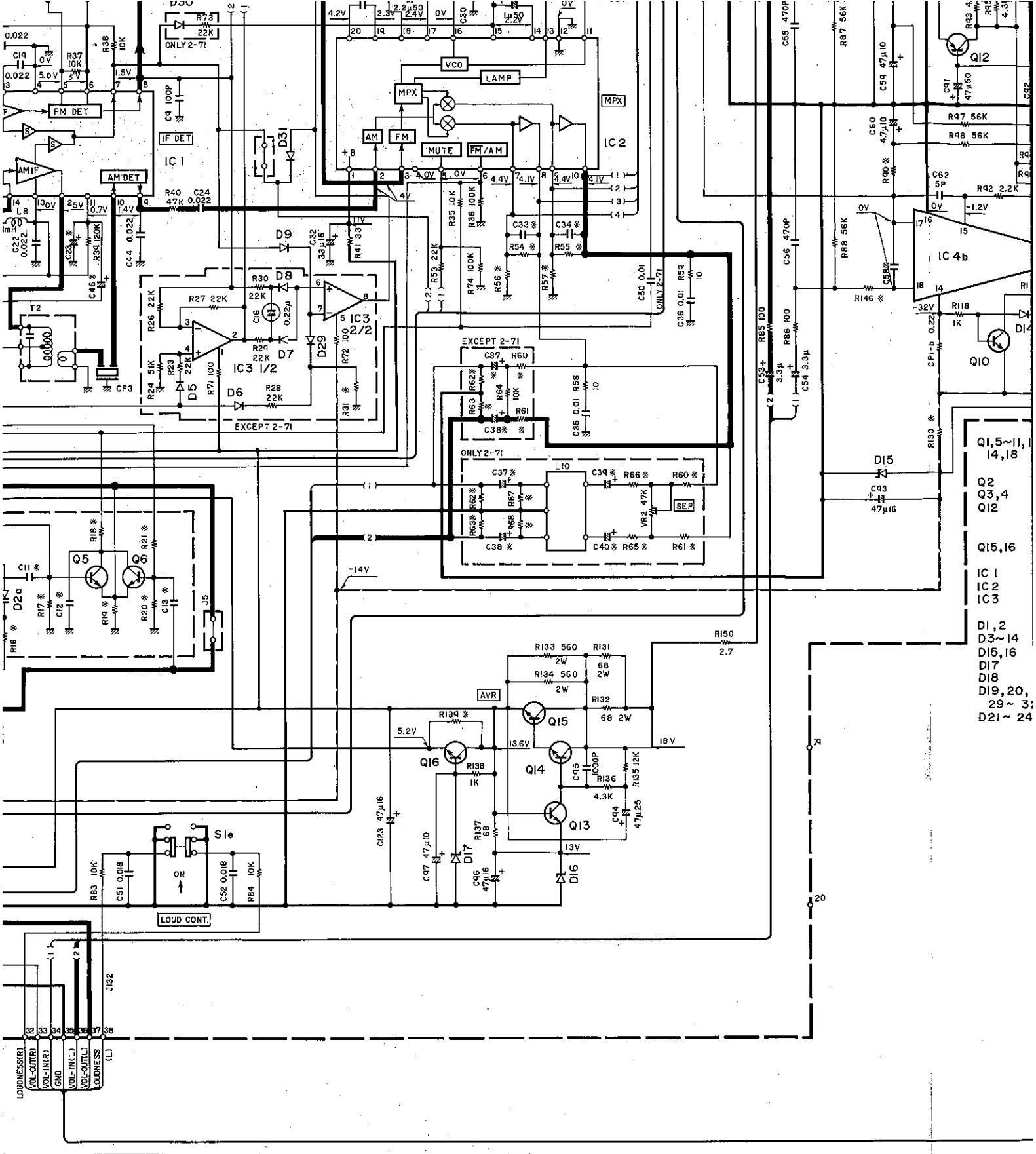


DESTINATION			R11	R12	R14	R15	R16	R17	R18	R19	R20	R21	R31	R52	R54	R55	R56	R57	R130	C23	C42	C46
X14-174	0-10	K,P	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	27K	56	68K	68K	NO	NO	1K2W	1μ	5P	4.7μ
	0-21	M	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	36K	56	68K	68K	NO	NO	1K2W	1μ	5P	4.7μ
	0-71	X	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	36K	56	68K	68K	NO	NO	1K2W	1μ	5P	4.7μ
	2-71	E	100K	47K	47K	1M	100K	510K	220	1K	510K	1M	NO	100	110K	110K	470K	470K	1.2K2W	10μ	22P	NO

DESTINATION			R60	R61	R62	R63	R65,66	R67,68	R89,90	R103,104	R105,106	R107,108	R109,110
X14-174	0-10	K,P	1.5K	1.5K	56K	56K	NO	NO	680	9.1K	2K	2.7K	330
	0-21	M	1.5K	1.5K	56K	56K	NO	NO	680	9.1K	2K	2.7K	330
	0-71	X	1.5K	1.5K	56K	56K	NO	NO	680	9.1K	2K	2.7K	330
	2-71	E	1K	1K	220K	220K	2.2K	3.3K	750	NO	NO	NO	NO

DESTINATION			Q1	Q3	C1	C5	C6	C12
X86-101	0-10	KPMX	2SK161	NO	3.9P	NO	3.9P	NO
	2-71	E	2SK241	2SK161	2.2P	9P	6P	2P

DESTINATION			R145	R146,146	C6	C7	C9,57,58	C10,11,12	C13	C33,34	C37,38	C39,40	C85,86	C87,88	C106~109	C110,111	C113,119	C114~117	C121,122
X14-174	0-10	K,P	R92-0173-05	Jumper	NO	NO	NO	NO	NO	1100P	0.33μ50	NO	0.1	NO	NO	NO	NO	NO	C91-0647-
	0-21	M	NO	Jumper	NO	NO	NO	NO	NO	750P	0.33μ50	NO	0.1	NO	NO	NO	NO	NO	C91-0647-
	0-71	X	NO	Jumper	NO	NO	NO	NO	NO	750P	0.33μ50	NO	0.1	NO	NO	NO	NO	NO	C91-0647-
	2-71	E	NO	2.2K	220P	150P	100P	0.022	0.022	470P	10μ50	1μ50	0.22	0.22	6800P	18P	680P	330P	C91-0647-



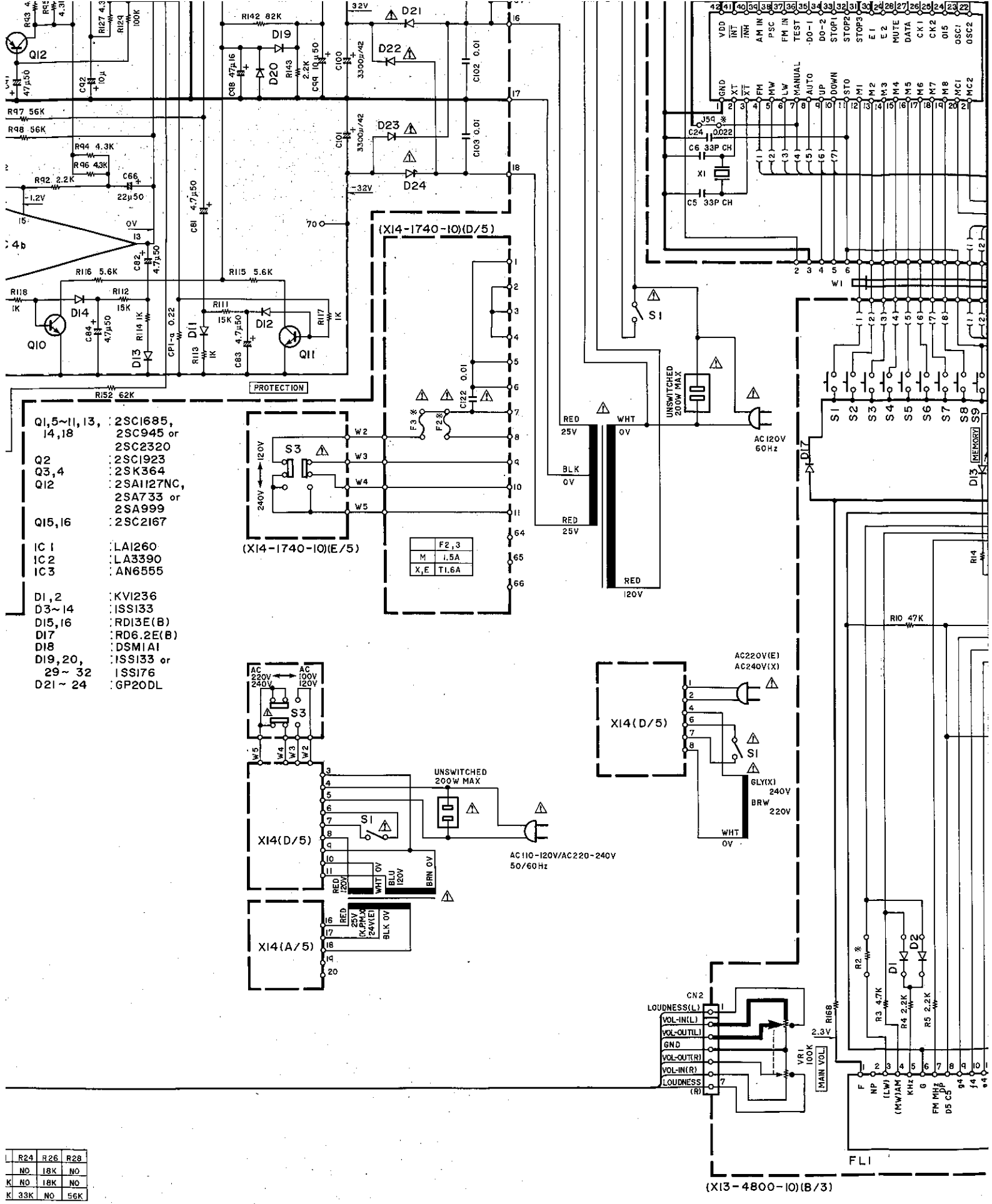
	C5	C6	C12	C13	R6	R7	R10	R11	R20
P	NO	3.9P	NO	IP	NO	22K	680	680	Jumper
P	9P	6P	2P	2.2P	100K	33K	100K	100K	22

DESTINATION			R1,2	R3,4	C15,16	C17,18
X85-103	0-10	KPUM UE	100	Jumper	560P	100P
	2-7I	XTE	IK	YES	2200P	220P

C14~117	C121,122	D5~10,29,31	D3,4,11~13	D2	IC3	IC4	Q18	Q5,6	Q3,4
NO	C91-0647-05	YES	NO	NO	YES	STK4151/2	YES	NO	NO
NO	C91-0647-05	YES	NO	NO	YES	STK4151/2	YES	NO	NO
NO	C91-0647-05	YES	NO	NO	YES	STK4151/2	YES	NO	NO
330P	C91-0647-05	NO	YES	YES	NO	STK4141/2	NO	YES	YES

DESTINATION			D1	D2	D19	S10	S16,17	Q1,2	Q3,4	Q7	Q8,9	R2	R7	R15	R16	R17	R18	R19	R24	R26	R28
X13-480	0-10	KPX	Jumper	NO	NO	NO	NO	NO	NO	YES	NO	NO	620	NO	NO	NO	NO	NO	NO	18K	NO
	0-21	M	Jumper	NO	NO	NO	YES	YES	NO	YES	NO	NO	620	47K	100K	6.8K	15K	100K	NO	18K	NO
	2-7I	E	ISSI33	ISSI33		YES	NO	YES	YES	NO	YES	4.7K	430	47K	100K	6.8K	15K	100K	33K	NO	56K

DESTINATION			R32	R33	R38	R39	R40	R45	R48,49	R50	R53	C15	C16	C19,20	J40,41	J59	J64
X13-480	0-10	KPX	NO	NO	56K	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO	YES
	0-21	M	NO	NO	56K	NO	NO	NO	820K	NO	NO	NO	NO	330P	YES	NO	NO
	2-7I	E	22K	10K	NO	IK	47K	47K	NO	47K	47K	1μ50	0.022	NO	YES	YES	NO



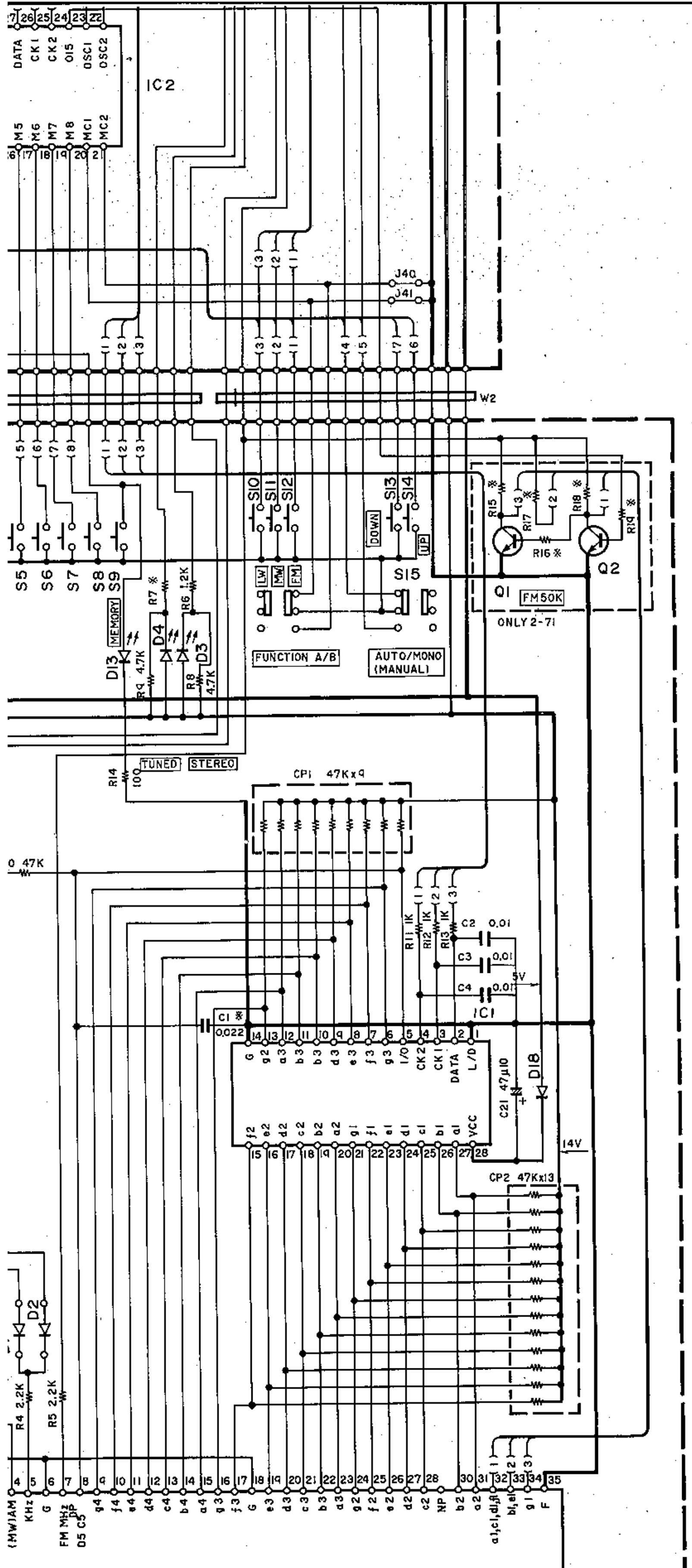
Q1,5~11,13, 14,18 : 2SC1685, 2SC945 or 2SC2320
Q2 : 2SC1923
Q3,4 : 2SK364
Q12 : 2SA1127NC, 2SA733 or 2SA999
Q15,16 : 2SC2167

IC1 : LA1260
IC2 : LA3390
IC3 : AN6555

D1,2 : KV1236
D3~14 : 1SS133
D15,16 : RD13E(B)
D17 : RD6.2E(B)
D18 : DSM1A1
D19,20, 29~32 : 1SS133 or 1SS176
D21~24 : GP20DL

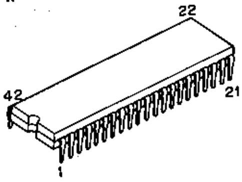
	R24	R26	R28
	NO	18K	NO
K	NO	18K	NO
K	33K	NO	56K

164
ES
NO
NO

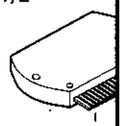


KR-A10 (K)

TC9157AP

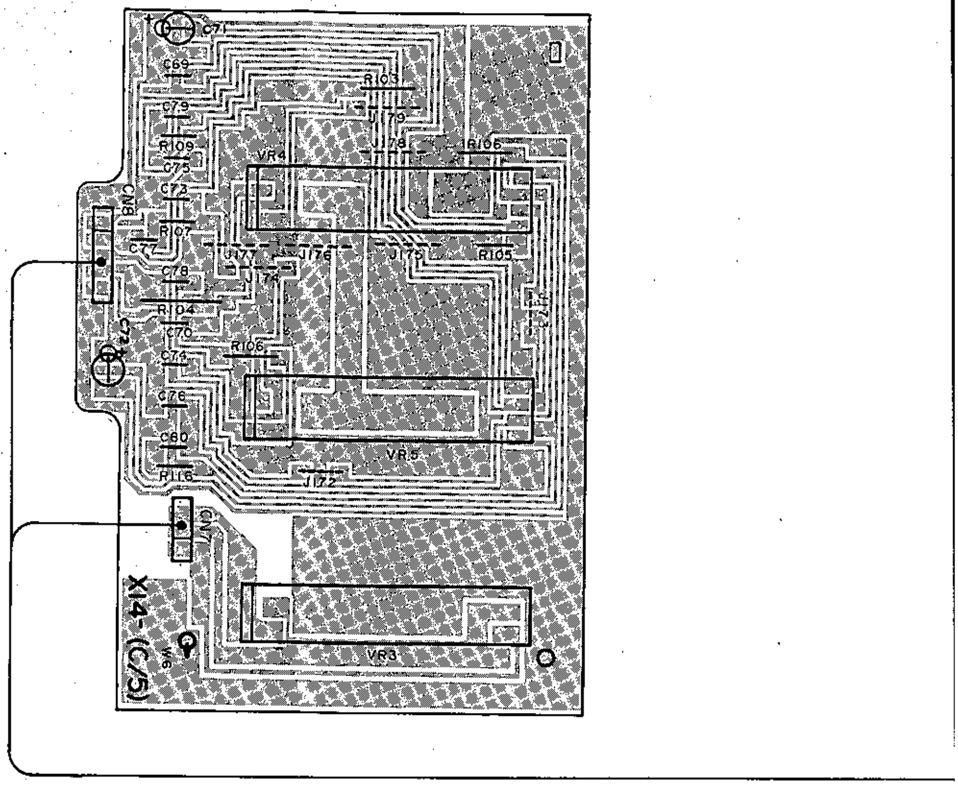


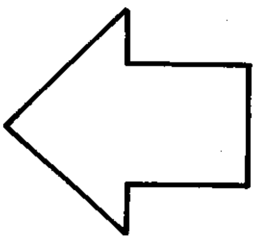
STK4141/2
STK4151/2



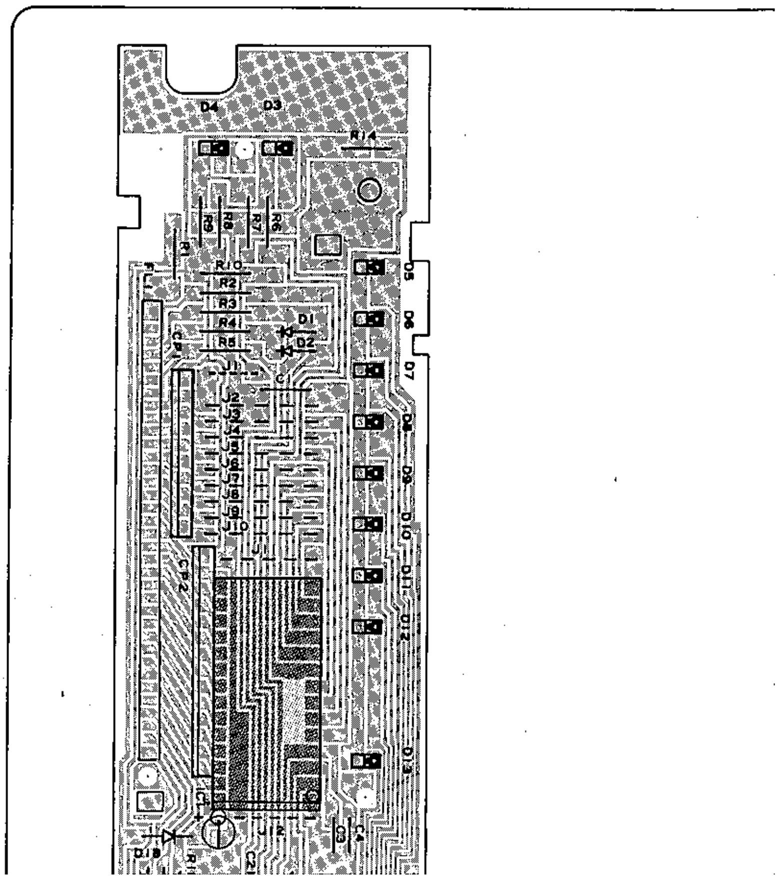
- DC voltages are as measured with a high in voltmeter. Values may vary slightly due to between individual instruments or/and units.
- Les tensions c.c. doivent être measurées avec mètre à haute impédance. Les valeurs peuven légèrement du fait des variations inhére appareils et aux instruments de mesure in
- Die angegebenen Gleichspannungswerte wu einem hochohmigen Voltmeter gemesser schwanken die Meßwerte aufgrund von Unte zwischen einzelnen instrumenten oder Gerä geringfügig.

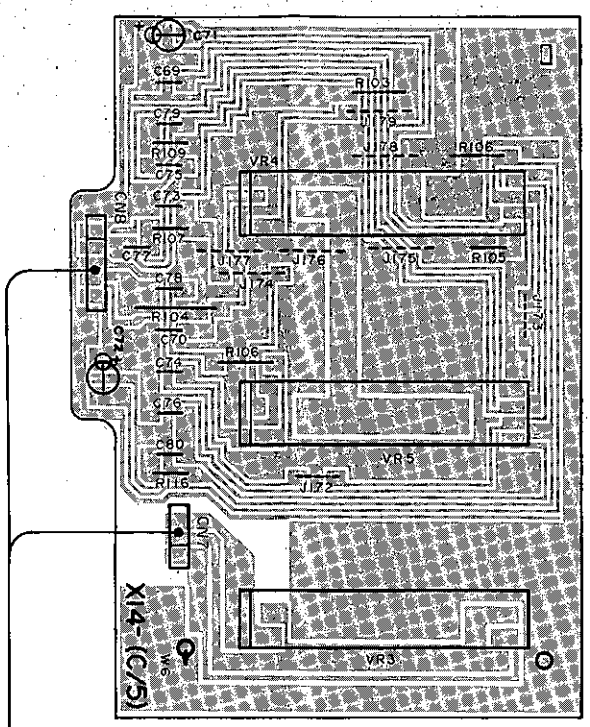
CAUTION: For continued safety, replace safety ponents only with manufacturer's recommende to parts list). ⚠Indicates safety critical con reduce the risk of electric shock, leakage-curren measurements shall be carried out (exposed part bly insulated from the supply circuit) before th returned to the customer.

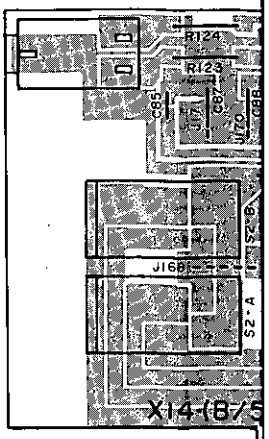

C71
C69
R103
C79
R109
C75
VR4
C73
R107
C77
C78
R104
C70
C74
R106
C76
C60
R116
VR5
J172
J175
J176
R105
VR3
X14-(C/5)



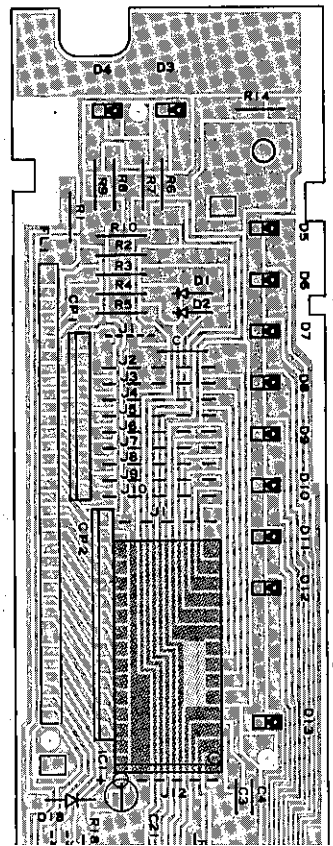
FRONT


D4
D3
R14
R10
R2
R3
R4
R5
D1
D2

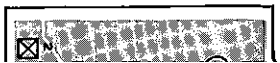




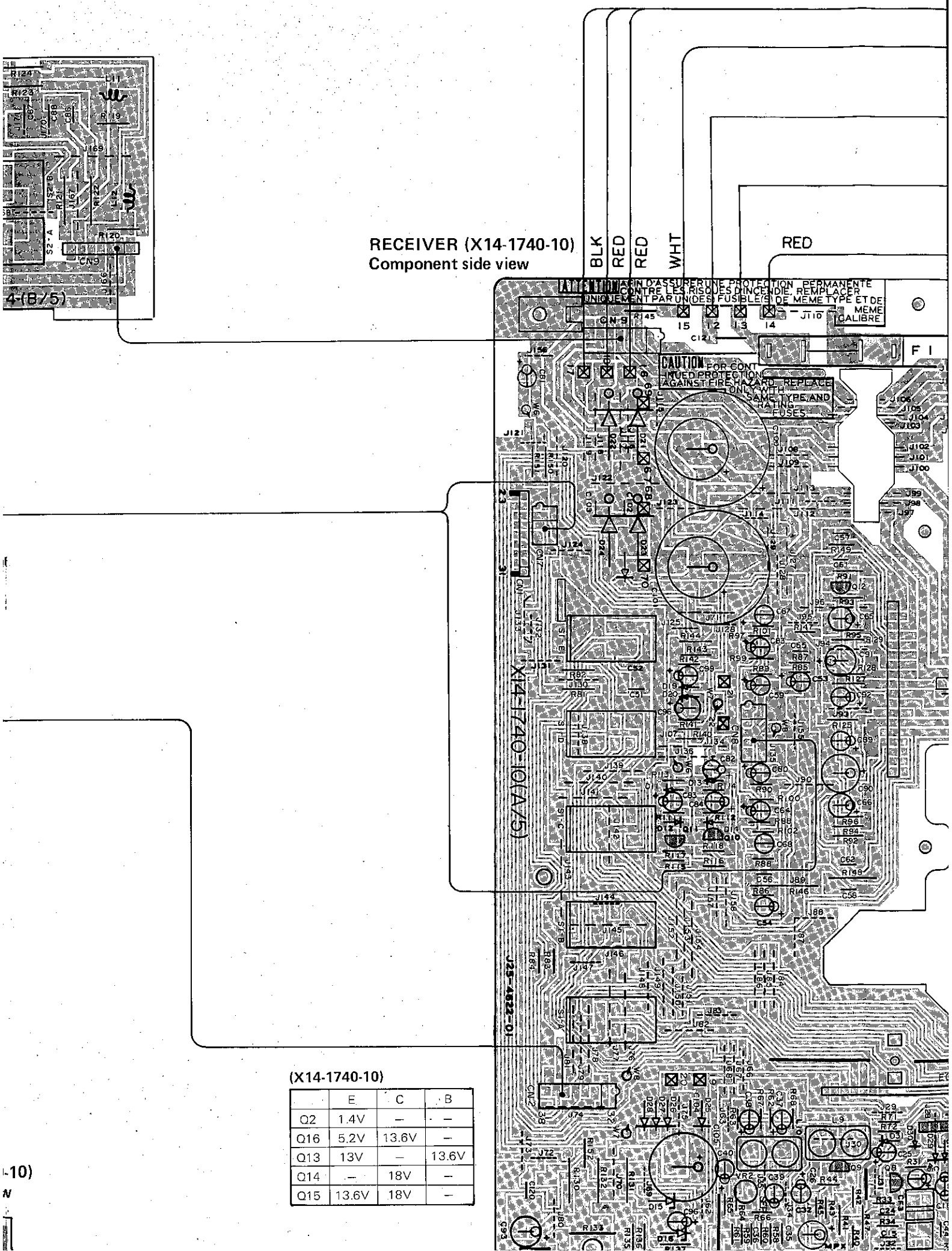
RONT



SWITCH (X13-4800-10)
Component side view



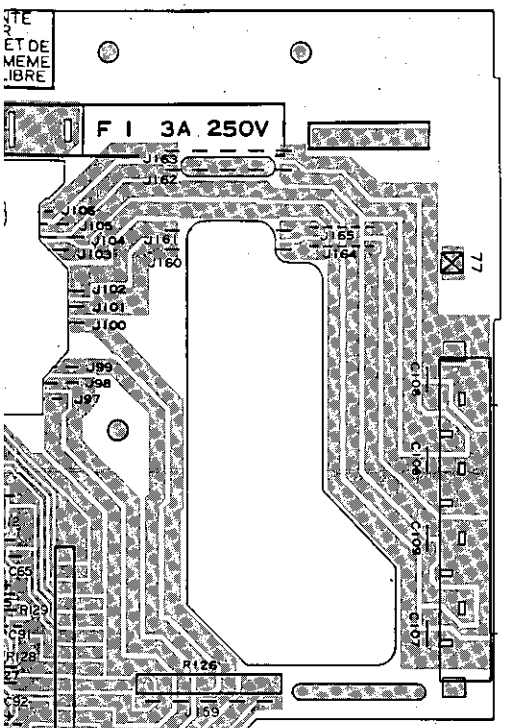
PC BOARD

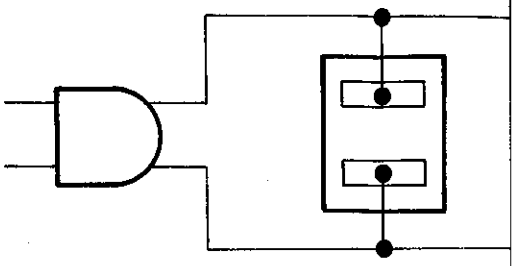


RECEIVER (X14-1740-10)
Component side view

(X14-1740-10)

	E	C	B
Q2	1.4V	—	—
Q16	5.2V	13.6V	—
Q13	13V	—	13.6V
Q14	—	18V	—
Q15	13.6V	18V	—





IC1

1	1.4V	9	1.4V
2	1.4V	10	1.4V
3	1.4V	11	0.7V
4	0V	12	5V
5	5V	13	0V
6	5V	14	0V
7	–	15	2.4V
8	1.5V	16	2.4V

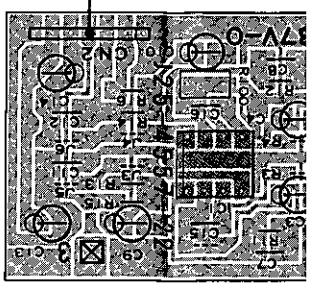
IC2

1	11V	11	–
2	4V	12	0V (GND)
3	4V	13	–
4	0V (NC)	14	2.2V
5	0V	15	2.2V
6	0V	16	0V
7	4.4V	17	2.4V
8	4.1V	18	2.4V
9	4.4V	19	2.3V
10	4.1V	20	4.2V

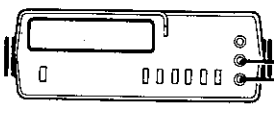
IC4

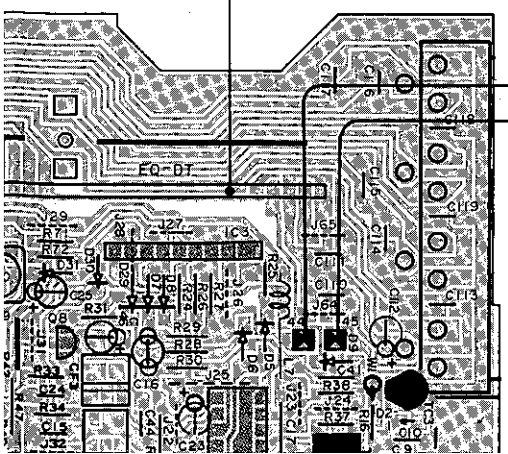
1	0V	10	
2	0V	11	
3	0V	12	
4	–2.8V	13	
5	–1.2V	14	
6	–1.4V	15	
7	–31V	16	
8	–31V	17	
9	–32V	18	

PREAMP (X85-1030-10



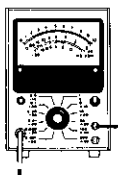
(b)
DC voltmeter





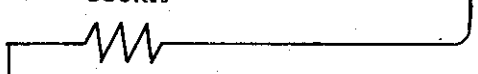
(c)

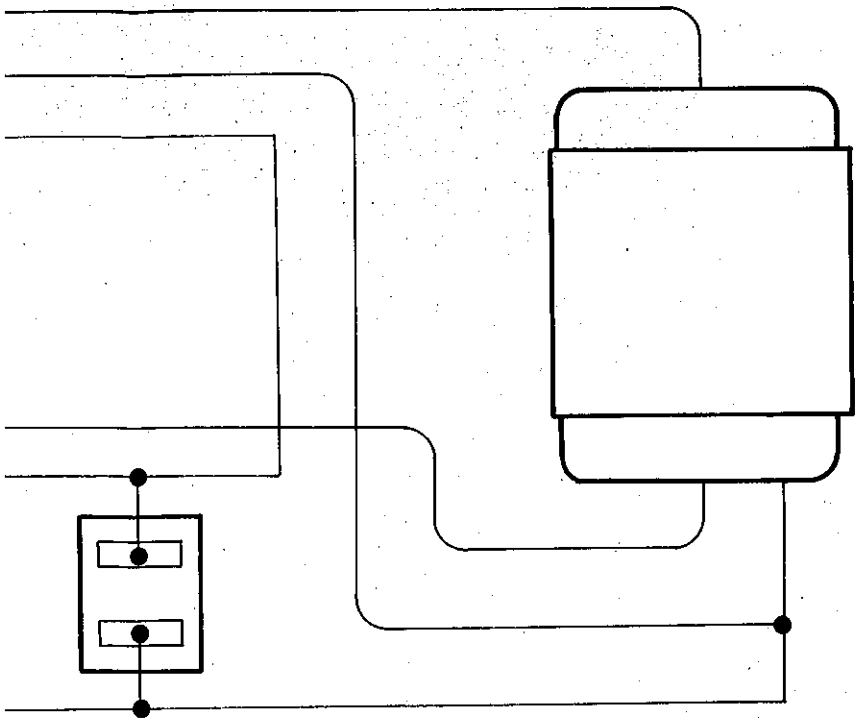
AC voltmeter



Frequency counter

330kΩ

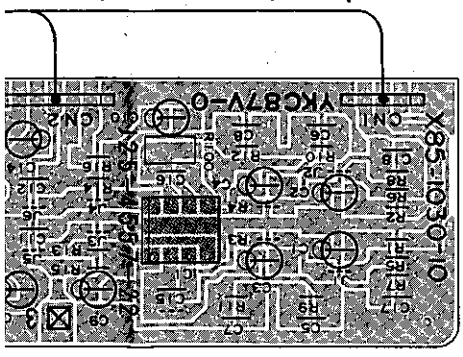




IC4

1	0V	10	0V
2	0V	11	32V
3	0V	12	30V
4	−2.8V	13	0V
5	−1.2V	14	−32V
6	−1.4V	15	−1.2V
7	−31V	16	0V
8	−31V	17	0V
9	−32V	18	0V

EAMP (X85-1030-10) Component side view

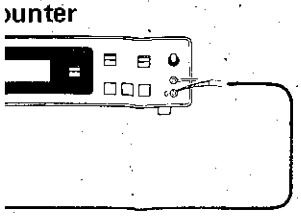


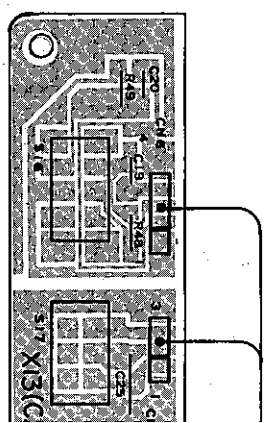
(X85-1030-10)

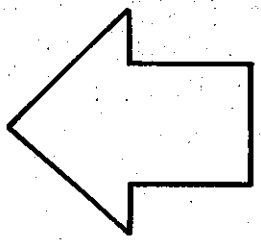
IC1

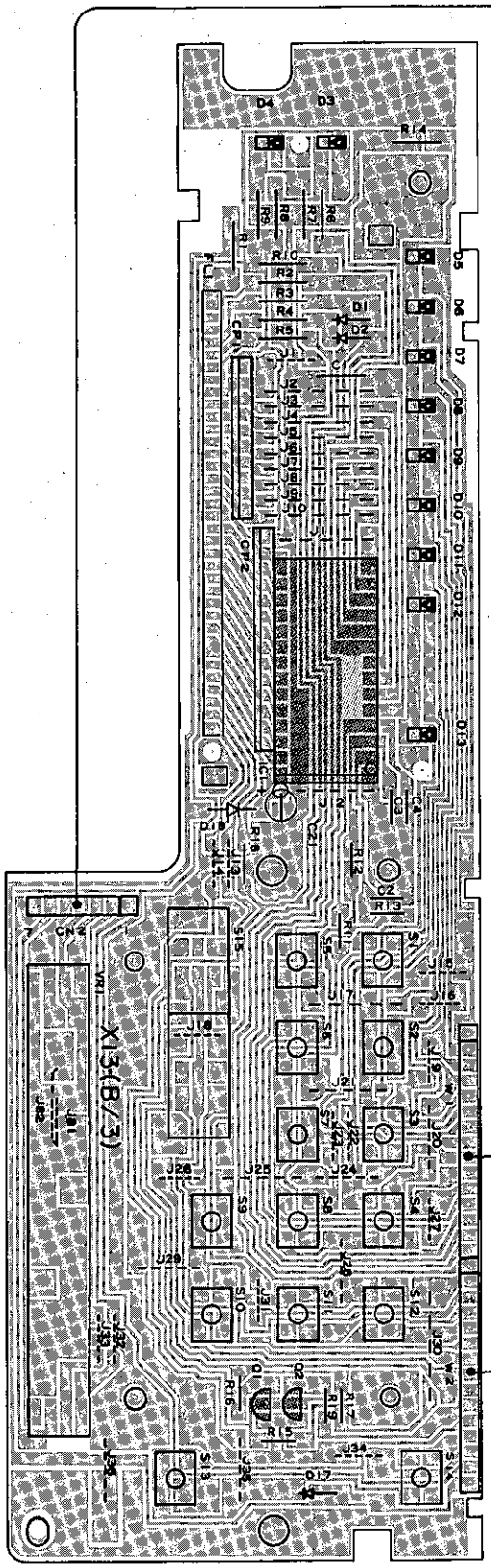
1	—
2	—
3	—
4	−14V
5	—
6	—
7	—
8	13.6V

requency ounter









(X13-4800-10)

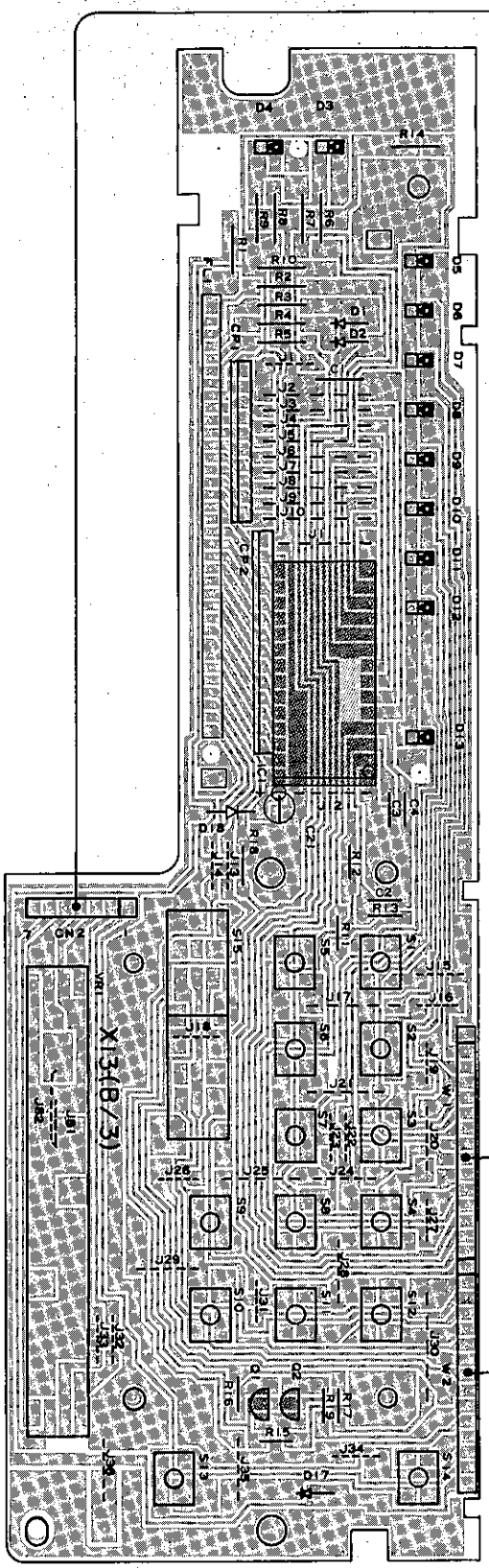
	E	C	B
Q8	14V	–	–
Q10	14V	MW : 14V	–
Q12	14V	FM : 14V	–

IC1

15	14V

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

NT



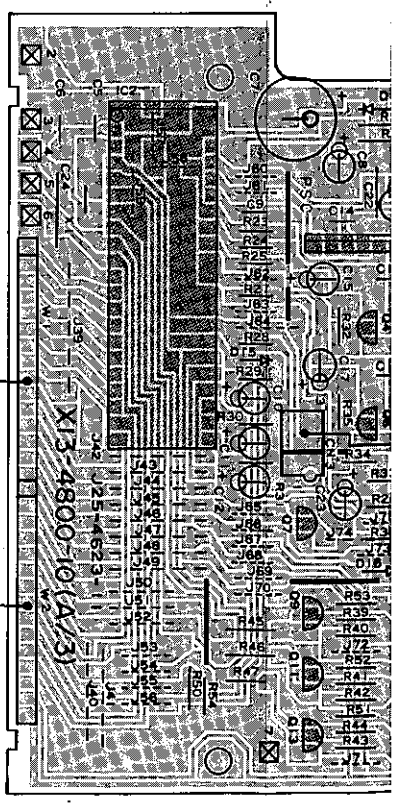
(X13-4800-10)

	E	C	B
Q8	14V	—	—
Q10	14V	MW : 14V	—
Q12	14V	FM : 14V	—

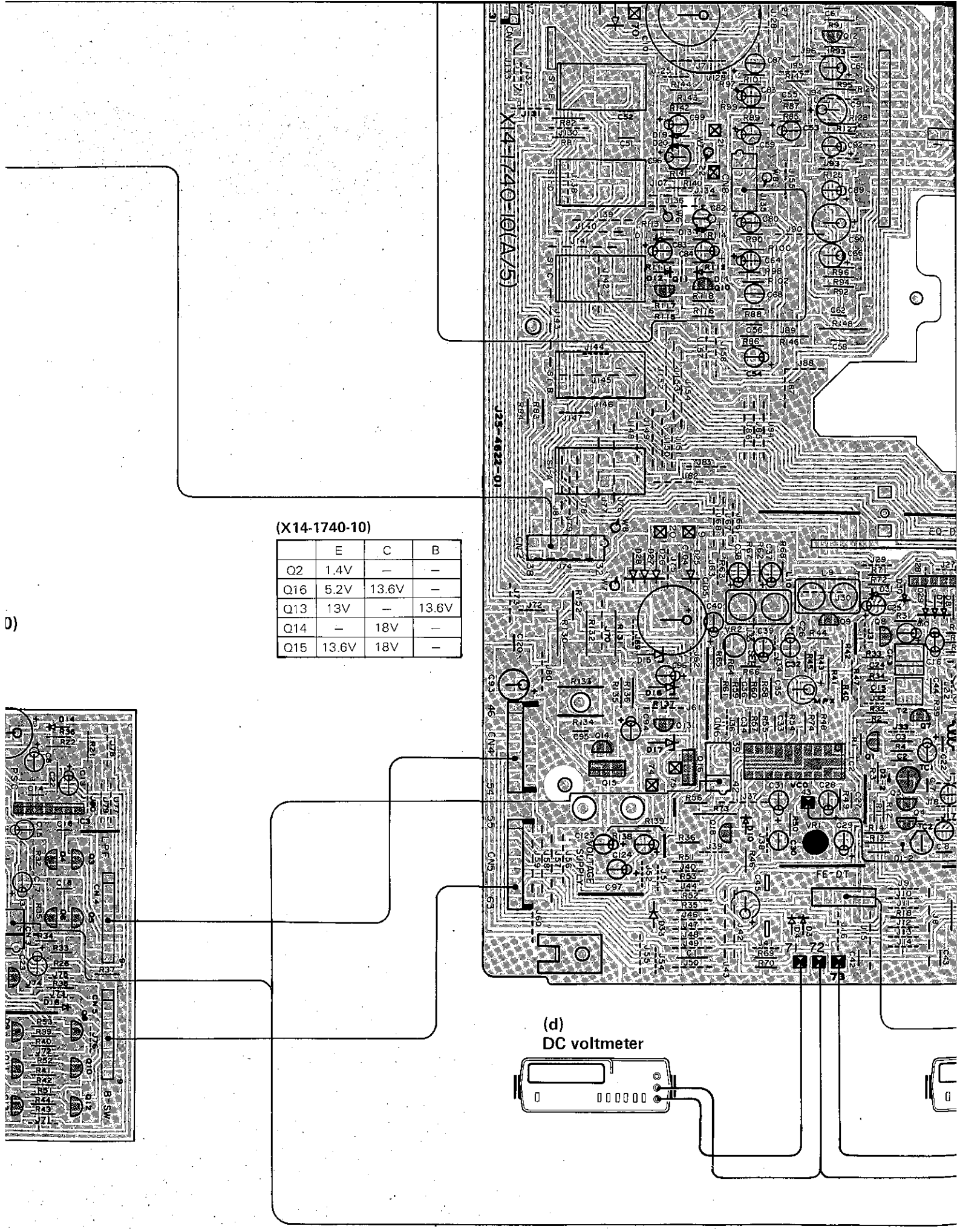
IC1

15	14V

SWITCH (X13-4800-10)
Component side view



natic diagram for the values of resistors and capacitors.
wing is viewing from the side easy to check.



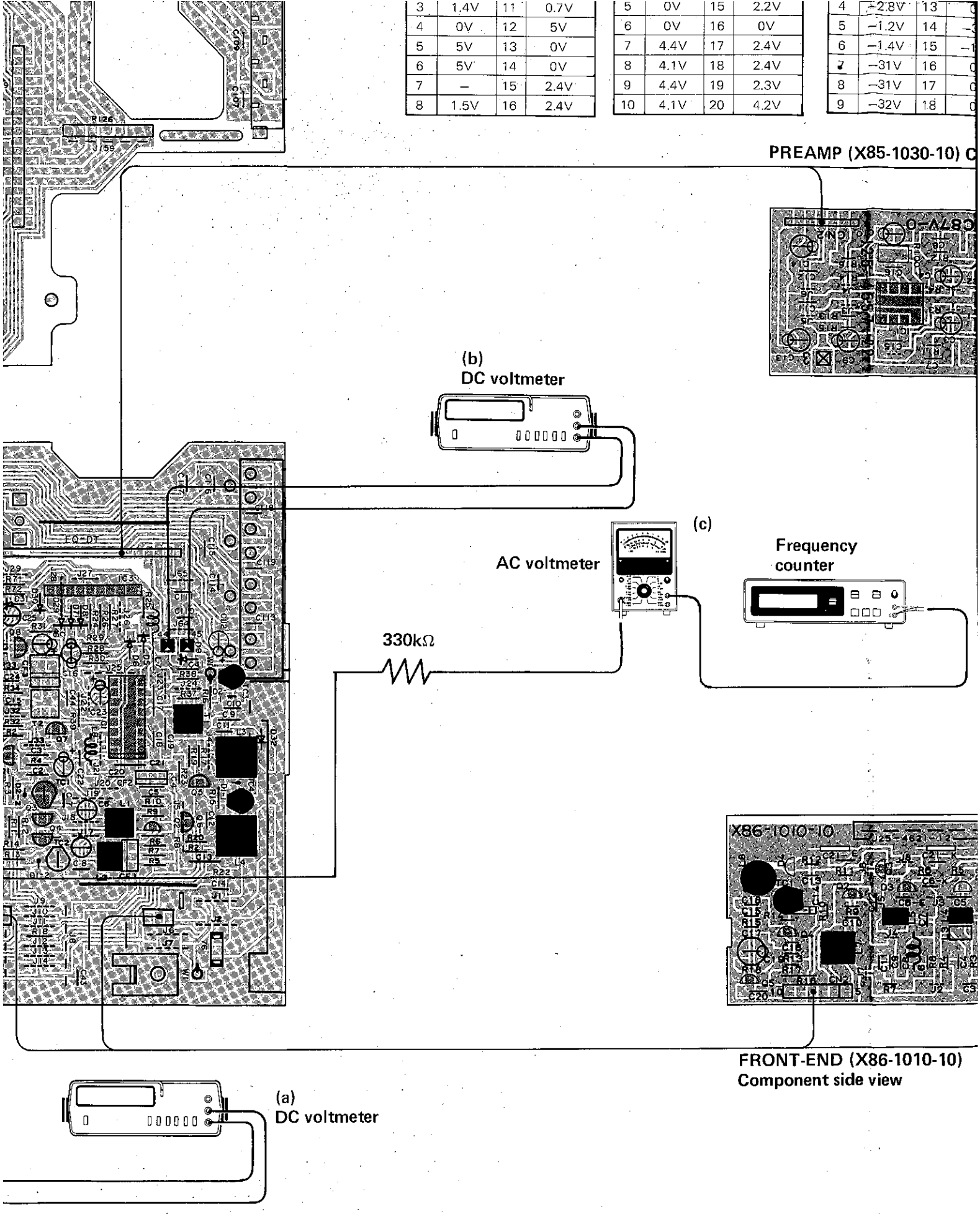
(X14-1740-10)

	E	C	B
Q2	1.4V	—	—
Q16	5.2V	13.6V	—
Q13	13V	—	13.6V
Q14	—	18V	—
Q15	13.6V	18V	—

3	1.4V	11	0.7V
4	0V	12	5V
5	5V	13	0V
6	5V	14	0V
7	–	15	2.4V
8	1.5V	16	2.4V

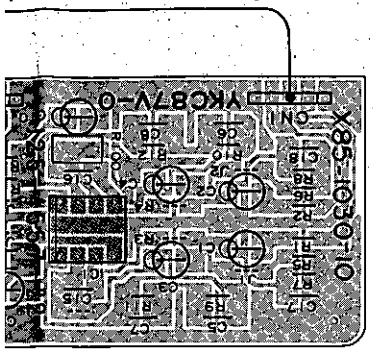
5	0V	15	2.2V
6	0V	16	0V
7	4.4V	17	2.4V
8	4.1V	18	2.4V
9	4.4V	19	2.3V
10	4.1V	20	4.2V

4	−2.8V	13	
5	−1.2V	14	
6	−1.4V	15	
7	−31V	16	
8	−31V	17	
9	−32V	18	



−2.8V	13	0V
−1.2V	14	−32V
−1.4V	15	−1.2V
−31V	16	0V
−31V	17	0V
−32V	18	0V

(X85-1030-10) Component side view

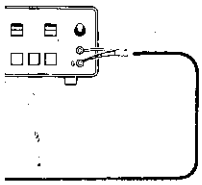


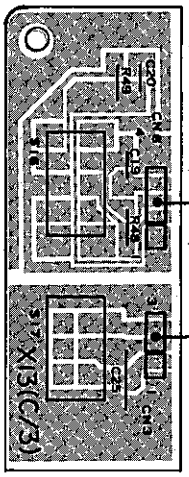
(X85-1030-10)

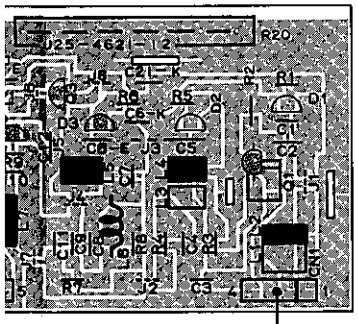
IC1

1	—
2	—
3	—
4	−14V
5	—
6	—
7	—
8	13.6V

y







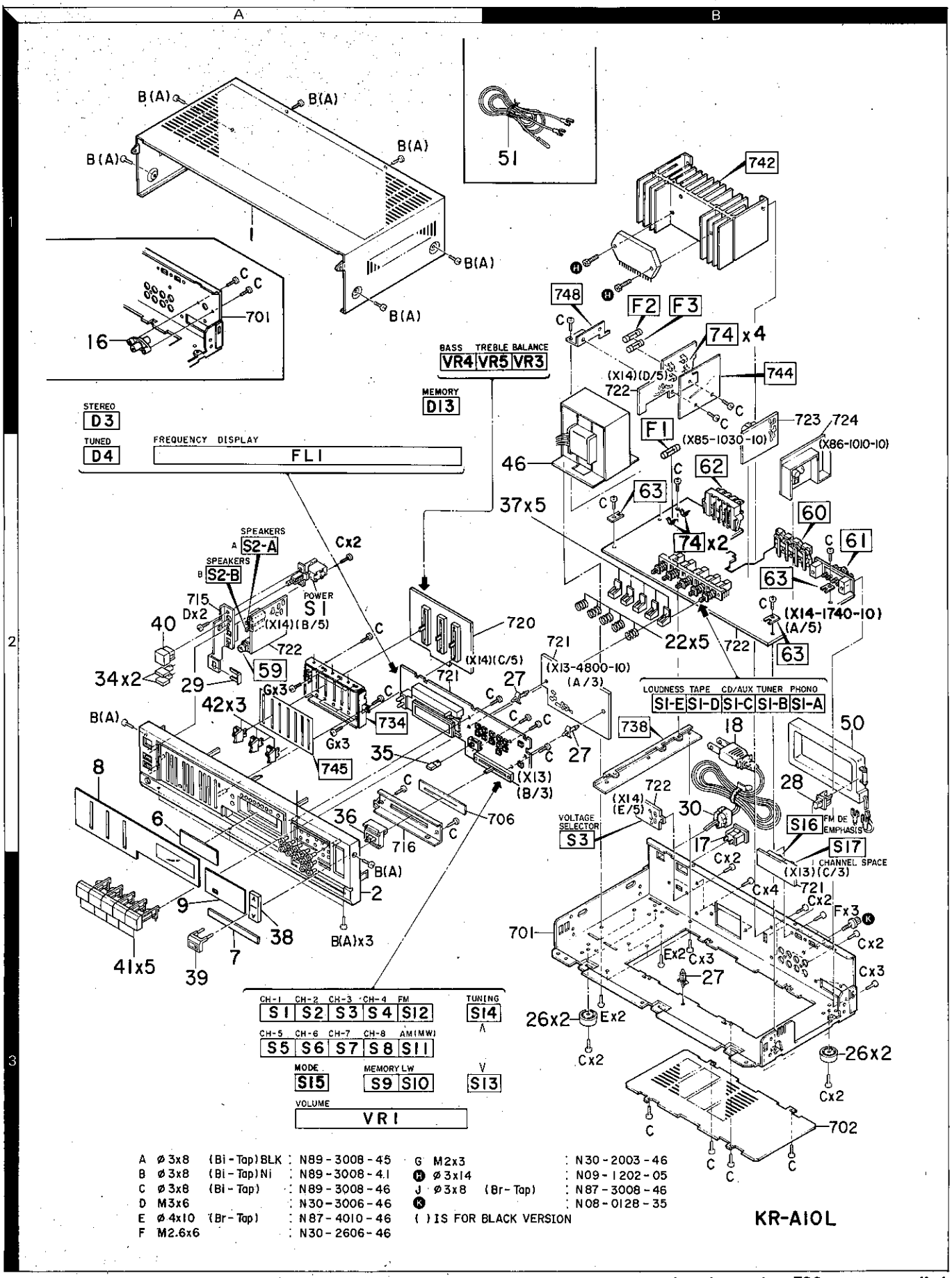
(X86-1010-10)

	G	D	S
Q1	—	9.5V	—
	E	C	B
Q2	1.1V	—	—
Q4	4.0V	—	—
Q5	0V (GND)	7.4V	—

(X86-1010-10)

de view

EXPLODED VIEW



A	ø3x8	(Bi-Tap)BLK	: N89-3008-45	G	M2x3		: N30-2003-46
B	ø3x8	(Bi-Tap)Ni	: N89-3008-41	H	ø3x14		: N09-1202-05
C	ø3x8	(Bi-Tap)	: N89-3008-46	J	ø3x8	(Br-Tap)	: N87-3008-46
D	M3x6		: N30-3006-46	K			: N08-0128-35
E	ø4x10	(Br-Tap)	: N87-4010-46	( ) IS FOR BLACK VERSION			
F	M2.6x6		: N30-2606-46				

Parts with the exploded numbers larger than 700 are not supplied.

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			KR-A10			
1	1A	*	A01-1390-01	METALLIC CABINET	KPMXE	
1	1A	*	A01-1404-01	METALLIC CABINET	E	
2	3A	*	A20-4281-01	PANEL	KPMXE	
2	3A	*	A20-4311-01	PANEL	E	
6	2A	*	B03-1743-04	DRESSING PLATE(F DISP FILTER)		
7	3A	*	B03-1744-04	DRESSING PLATE(UNDER VOL KNOB)	KPMXE	
7	3A	*	B03-1786-04	DRESSING PLATE(UNDER VOL KNOB)	E	
8	2A	*	B03-1738-03	DRESSING PLATE(TONE,BAL,DISP)	KPMX	
8	2A	*	B03-1740-03	DRESSING PLATE(TONE,BAL,DISP)	EE	
9	3A	*	B03-1741-04	DRESSING PLATE(PRESET CHANNEL)	KPMX	
9	3A	*	B03-1742-04	DRESSING PLATE(PRESET CHANNEL)	E	
9	3A	*	B03-1785-04	DRESSING PLATE(PRESET CHANNEL)	E	
-			B46-0092-03	WARRANTY CARD	K	
-			B46-0096-13	WARRANTY CARD	X	
-			B46-0121-03	WARRANTY CARD	P	
-		*	B46-0122-13	WARRANTY CARD	EE	
-		*	B50-5588-00	INSTRUCTION MANUAL(ENGLISH)	KPMX	
-		*	B50-5589-00	INSTRUCTION MANUAL(FRENCH)	PMX	
-		*	B50-5590-00	INSTRUCTION MANUAL(SPANISH)	M	
-		*	B50-5591-00	INSTRUCTION MANUAL(ARABIC)	M	
-		*	B50-5593-00	INSTRUCTION MANUAL(E,F,G,D,I)	EE	
-			B58-0245-33	CAUTION CARD	EE	
-			B58-0269-04	CAUTION CARD	K	
13	2A	*	D21-1075-04	EXTENSION SHAFT		
16	1A		E04-0006-05	RF COAXIAL CABLE RECEPTACLE	EE	
⚠ 17	2B		E03-0036-05	AC OUTLET	KM	
⚠ 17	2B		E03-0041-05	AC OUTLET	P	
⚠ 18	2B		E30-0181-05	AC POWER CORD	K	
⚠ 18	2B		E30-0459-05	AC POWER CORD	EE	
⚠ 18	2B		E30-0812-05	AC POWER CORD	M	
⚠ 18	2B		E30-0974-05	AC POWER CORD	P	
⚠ 18	2B		E30-1341-05	AC POWER CORD	X	
22	2B	*	G01-1623-04	COMPRESSION SPRING		
-		*	H01-5384-04	ITEM CARTON CASE	KPMX	
-		*	H01-5386-04	ITEM CARTON CASE	E	
-		*	H01-5414-04	ITEM CARTON CASE	E	
-		*	H10-1783-02	POLYSTYRENE FOAMED FIXTURE		
-		*	H12-0198-04	PACKING FIXTURE		
-			H25-0223-04	PROTECTION BAG (750X350)		
-			H25-0232-04	PROTECTION BAG (235X350)		
26	3B		J02-0129-05	FOOT		
27	2B,3B		J19-0506-05	UNIT HOLDER		
28	2B		J19-0626-12	ANTENNA HOLDER		
29	2A		J21-3326-05	JACK MOUNTING HARDWARE		
⚠ 30	2B		J42-0083-05	POWER CORD BUSHING		
-			J61-0307-05	WIRE BAND		
34	2A		K27-1304-04	KNOB (BUTTON) SPEAKERS A/B	KPMXE	
34	2A	*	K27-1481-04	KNOB (BUTTON) SPEAKERS A/B	E	
35	2A	*	K27-1438-04	KNOB (BUTTON) MODE	KPMXE	
35	2A	*	K27-1482-04	KNOB (BUTTON) MODE	E	

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36	2A	*	K27-1439-04	KNOB (BUTTON) VOL KNOB ADPT		
37	2B	*	K27-1460-04	KNOB ADAPTER SELECTOR		
38	3A		K27-1305-04	KNOB (CAP) TUNING	E	
38	3A	*	K27-1476-04	KNOB (CAP) TUNING	KPMXE	
39	3A		K29-1847-04	KNOB (SLIDE) VOLUME	E	
39	3A		K29-1862-04	KNOB (SLIDE) VOLUME	KPMXE	
40	2A		K29-1446-04	KNOB ASSY (BUTTON) POWER	E	
40	2A		K29-2001-04	KNOB ASSY (BUTTON) POWER	KPMXE	
41	3A	*	K29-2043-04	KNOB ASSY (BUTTON) SEL,LOUD		
42	2A	*	K29-2125-04	KNOB (SLIDE) BASS,TREB,BAL		
46	2B	*	L01-4001-05	POWER TRANSFORMER	K	
⚠ 46	2B	*	L01-4002-05	POWER TRANSFORMER	EE	
⚠ 46	2B	*	L01-4005-05	POWER TRANSFORMER	M	
⚠ 46	2B	*	L01-4007-05	POWER TRANSFORMER	X	
⚠ 46	2B	*	L01-4008-05	POWER TRANSFORMER	P	
K	3B		N08-0128-35	BINDING POST (GND)		
⚠ S1	2A		S40-1066-05	PUSH SWITCH (POWER TYPE)		
50	2B		T90-0104-15	LOOP ANTENNA	KPMX	
50	2B		T90-0111-15	LOOP ANTENNA	EE	
51	1B		T90-0132-05	T TYPE ANTENNA		
SWITCH (X13-4800-10)						
D3	1A		B30-0483-05	LED(SLP-170B) STEREO		
D4	2A		B30-0484-05	LED(SLP-270B) TUNED		
D13	1A		B30-0483-05	LED(SLP-170B) MEMORY		
C1			C91-0085-05	CERAMIC 0.022UF N		
C2 -4			C91-0769-05	CERAMIC 0.01UF M		
C5 ,6			CC45FCH1H330J	CERAMIC 33PF J		
C7			CE04FW0J222M	ELECTRO 2200UF 6.3WV		
C8			CE04FW1C100M	ELECTRO 10UF 16WV		
C9			CK45FF1H223Z	CERAMIC 0.022UF Z		
C10			CE04FW1V4R7M	ELECTRO 4.7UF 35WV		
C11 ,12			CE04FW1H010M	ELECTRO 1.0UF 50WV		
C13			CE04FW1A470M	ELECTRO 47UF 10WV		
C14			CK45FF1H223Z	CERAMIC 0.022UF Z		
C15			CE04FW1H010M	ELECTRO 1.0UF 50WV	EE	
C16			CK45FF1H223Z	CERAMIC 0.022UF Z	EE	
C17			CE04FW1HR22M	ELECTRO 0.22UF 50WV		
C18			CK45FF1H223Z	CERAMIC 0.022UF Z		
C19 ,20			CC45FSL1H331J	CERAMIC 330PF J	MX	
C21			CE04FW1A470M	ELECTRO 47UF 10WV		
C22			C91-0085-05	CERAMIC 0.022UF N		
C23			CE04FW1C220M	ELECTRO 22UF 16WV		
C24			C91-0085-05	CERAMIC 0.022UF N		
X1			L77-0578-05	CRYSTAL RESONATOR(7.2MHZ)		
CP1			R90-0193-05	MULTI-COMP 47KX9 J 1/6W		
CP2			R90-0192-05	MULTI-COMP 47KX13 J 1/6W		
VR1	3A	*	R13-5064-05	POTENTIOMETER(100KX2) VOLUME		
S1 -9	3A		S40-1064-05	PUSH SWITCH (PRESET CH,MEMORY)		
S10	3A		S40-1064-05	PUSH SWITCH (LW)	EE	
S11 -14	3A		S40-1064-05	PUSH SWITCH (FM/AM,TUNING)		
S15	3A		S40-2200-05	PUSH SWITCH (MODE)		
S16 ,17	2B		S31-2072-05	SLIDE SW (FM DE-EMPH,CH SPACE)	MX	

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D1 ,2			1SS133	DIODE			EE	
D14 -18			1SS133	DIODE				
D19			RD5.1E(B2)	ZENER DIODE			EE	
FL1	2A		7-BT-20ZK	FLUORESCENT INDICATOR TUBE			KPMX	
FL1	2A		7-BT-22ZK	FLUORESCENT INDICATOR TUBE			EE	
IC1			TD6301AP	IC(FL/LED/LCD FREQ DISPLAY DR)				
IC2			TC9157AP	IC(DIGITAL TUNING SYSTEM)				
IC3			TD6104P	IC(PRE SCALER)				
Q1 ,2			2SC1685(R,S)	TRANSISTOR			MXEE	
Q3 -6			2SC1845(F,E)	TRANSISTOR			EE	
Q5 ,6			2SC1845(F,E)	TRANSISTOR			KPMX	
Q7			2SC1685(R,S)	TRANSISTOR			KPMX	
Q7			2SC945(A)(Q,P)	TRANSISTOR			KPMX	
Q8			2SA1127NC(R,S)	TRANSISTOR			EE	
Q9			2SC1685(R,S)	TRANSISTOR			EE	
Q9			2SC945(A)(Q,P)	TRANSISTOR			EE	
Q10			2SA1127NC(R,S)	TRANSISTOR				
Q10			2SA733(A)(Q,P)	TRANSISTOR				
Q11			2SC1685(R,S)	TRANSISTOR				
Q11			2SC945(A)(Q,P)	TRANSISTOR				
Q12			2SA1127NC(R,S)	TRANSISTOR				
Q12			2SA733(A)(Q,P)	TRANSISTOR				
Q13			2SC1685(R,S)	TRANSISTOR				
Q13			2SC945(A)(Q,P)	TRANSISTOR				
RECEIVER (X14-1740-10)								
C1			C91-0085-05	CERAMIC	0.022UF	N		
C2			C91-0769-05	CERAMIC	0.01UF	M		
C3		*	C91-0729-05	CERAMIC	22PF	J		
C4 ,5			C91-0769-05	CERAMIC	0.01UF	M		
C6		*	CQ09FS1H221JY0	POLYSTY	220PF	J	EE	
C7			CC45FSL1H151J	CERAMIC	150PF	J	EE	
C8			CQ09FS1H391JY0	POLYSTY	390PF	J		
C9			CC45FSL1H101J	CERAMIC	100PF	J	EE	
C10			CK45FF1H223Z	CERAMIC	0.022UF	Z	EE	
C11			CK45F1H223Z	CERAMIC	0.022UF	Z	EE	
C12			CK45FF1H223Z	CERAMIC	0.022UF	Z	EE	
C13			C91-0085-05	CERAMIC	0.022UF	N	EE	
C14 ,15			CK45FF1H223Z	CERAMIC	0.022UF	Z		
C16			CE04HW1HR22M	NP-ELEC	0.22UF	50WV	KPMX	
C17			C91-0085-05	CERAMIC	0.022UF	N		
C18			CK45FF1H223Z	CERAMIC	0.022UF	Z		
C19			C91-0085-05	CERAMIC	0.022UF	N		
C20			CK45FF1H223Z	CERAMIC	0.022UF	Z		
C21			C91-0085-05	CERAMIC	0.022UF	N		
C22			CK45FF1H223Z	CERAMIC	0.022UF	Z		
C23			CE04FW1C100M	ELECTRO	10UF	16WV	EE	
C23			CE04FW1H010M	ELECTRO	1.0UF	50WV	KPMX	
C24			CF92FV1H223J	MF	0.022UF	J		
C25 ,26			CE04FW1V4R7M	ELECTRO	4.7UF	35WV		
C27			CF92FV1H473J	MF	0.047UF	J		
C28			CE04FW1H2R2M	ELECTRO	2.2UF	50WV		
C29			CE04FW1H3R3M	ELECTRO	3.3UF	50WV		
C30			CQ09FS1H102JY0	POLYSTY	1000PF	J		
C31			CE04FW1H010M	ELECTRO	1.0UF	50WV		
C32			CE04FW1C330M	ELECTRO	33UF	16WV		

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C33 ,34			CF92FV1H112J	MF	1100PF	J	KP	
C33 ,34			CK45FB1H471K	CERAMIC	470PF	K	EE	
C33 ,34		*	CQ09FS1H751J	POLYSTY	750PF	J	MX	
C35 ,36			C91-0769-05	CERAMIC	0.01UF	M		
C37 ,38			CE04FW1C100M	ELECTRO	10UF	16WV	EE	
C37 ,38			CE04FW1HR33M	ELECTRO	0.33UF	50WV	KPMX	
C39 ,40			CE04FW1H010M	ELECTRO	1.0UF	50WV	EE	
C41		*	C91-0745-05	CERAMIC	100PF	K		
C42			CC45FSL1H050C	CERAMIC	5.0PF	C	KPMX	
C42			CC45FSL1H220J	CERAMIC	22PF	J	EE	
C43 ,44			CK45FF1H223Z	CERAMIC	0.022UF	Z	EE	
C44			CK45FF1H223Z	CERAMIC	0.022UF	Z	KPMX	
C45			CE04FW1C101M	ELECTRO	100UF	16WV		
C46			CE04FW1V4R7M	ELECTRO	4.7UF	35WV	KPMX	
C47			CE04W1A470M	ELECTRO	47UF	10WV	EE	
C49 ,50			CK45FF1H103Z	CERAMIC	0.010UF	Z	EE	
C51 ,52			CF92FV1H183J	MF	0.018UF	J		
C53 ,54			CE04FW1H3R3M	ELECTRO	3.3UF	50WV		
C55 ,56			CK45FB1H471K	CERAMIC	470PF	K		
C57 ,58			CC45FSL1H101J	CERAMIC	100PF	J	EE	
C59 ,60			CE04FW1A470M	ELECTRO	47UF	10WV		
C61 ,62			CC45FSL1H050C	CERAMIC	5.0PF	C		
C63 ,64			CE04FW1E100M	ELECTRO	10UF	25WV		
C65 ,66			CE04FW1H220M	ELECTRO	22UF	50WV		
C67 ,68			CE04HW1H010M	NP-ELEC	1.0UF	50WV		
C69 ,70			CF92FV1H183J	MF	0.018UF	J		
C71 ,72			CE04FW1H0R1M	ELECTRO	0.1UF	50WV		
C73 ,74			CC45FSL1H221J	CERAMIC	220PF	J		
C75 ,76			CK45FB1H102K	CERAMIC	1000PF	K		
C77 ,78			CF92FV1H103J	MF	0.010UF	J		
C79 ,80			CF92FV1H473J	MF	0.047UF	J		
C81 -84			CE04FW1H4R7M	ELECTRO	4.7UF	50WV		
C85 -88			CF92FV1H224J	MF	0.22UF	J	EE	
C85 ,86			CF92FV1H104J	MF	0.10UF	J	KPMX	
C89			CE04FW1H100M	ELECTRO	10UF	50WV		
C90			CE04FW1H101M	ELECTRO	100UF	50WV		
C91			CE04FW1H470M	ELECTRO	47UF	50WV		
C92			CE04FW1H100M	ELECTRO	10UF	50WV		
C93			CE04FW1C470M	ELECTRO	47UF	16WV		
C94			CE04FW1E470M	ELECTRO	47UF	25WV		
C95			CK45FB1H102K	CERAMIC	1000PF	K		
C96			CE04FW1C470M	ELECTRO	47UF	16WV		
C97			CE04FW1A470M	ELECTRO	47UF	10WV		
C98			CE04FW1C470M	ELECTRO	47UF	16WV		
C99			CE04FW1H100M	ELECTRO	10UF	50WV		
C100,101			C90-1232-05	ELECTRO	3300UF	42WV		
C102,103			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C106-109		*	CK45FF1H682Z	CERAMIC	6800PF	Z	EE	
C110,111			CC45FSL1H180J	CERAMIC	18PF	J	EE	
C112			CE04FW1H010M	ELECTRO	1.0UF	50WV		
C113			CK45FB1H681K	CERAMIC	680PF	K	EE	
C114-117			CC45FSL1H331J	CERAMIC	330PF	J	EE	
C119			CK45FB1H681K	CERAMIC	680PF	K	EE	
C120			CK45FF1H473Z	CERAMIC	0.047UF	Z		
⚠ C121			C91-0647-05	CERAMIC	0.01UF	P	KP	

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⚠	C122			C91-0647-05	CERAMIC 0.01UF P	MXEE	
	C123			CE04FW1C100M	ELECTRO 10UF 16WV	KPMX	
	TC1			C05-0097-05	CERAMIC TRIMMER CAPACITOR(30PF	EE	
	TC2			C05-0303-05	CERAMIC TRIMMER CAPACITOR(20PF		
	TC3			C05-0097-05	CERAMIC TRIMMER CAPACITOR(30PF	EE	
	TC4			C05-0303-05	CERAMIC TRIMMER CAPACITOR(20PF		
	59	2A		E11-0127-05	PHONE JACK (3P)		
	60	2B		E13-0814-05	PHONO JACK (8P)		
	61	2B		E20-0452-05	SCREW TERMINAL BOARD(4P) FM/AM		
	62	2B		E20-0823-05	LOCK TERMINAL BOARD (8P) SPKRS		
	63	2B		E23-0125-05	TERMINAL (GND)		
⚠	F1	1B		F06-3023-05	FUSE (UL) (250V 3A)	KP	
⚠	F2	1B		F05-1623-05	FUSE (SEMKO) (250V T1.6A)	XEE	
⚠	F2 ,3	1B		F05-1521-05	FUSE (250V 1.5A)	M	
	74	1B,2B		J13-0041-05	FUSE CLIP	KPM	
	74	1B,2B		J13-0054-05	FUSE CLIP	XEE	
	CF1 ,2			L72-0140-05	CERAMIC FILTER	KPMX	
	CF1 ,2			L72-0190-05	CERAMIC FILTER	EE	
	CF3			L72-0082-05	CERAMIC FILTER	KPMX	
	CF3			L72-0099-05	CERAMIC FILTER	EE	
	L1			L32-0288-05	MW OSCILLATING COIL	EE	
	L2			L32-0277-15	MW OSCILLATING COIL		
	L3			L31-0499-05	LW-RF COIL	EE	
	L4			L31-0509-05	MW-RF COIL		
	L7			L40-1092-14	SMALL FIXED INDUCTOR(1.0UH,M)		
	L8		*	L40-1021-14	SMALL FIXED INDUCTOR(1.0MH,K)		
	L9			L79-0125-05	LC FILTER	EE	
	L10			L79-0140-05	LC FILTER	EE	
	L11 ,12			L39-0085-05	PHASE-COMPENSATION COIL		
	T1			L30-0428-05	FM IFT		
	T2			L30-0337-05	AM IFT	KPMX	
	T2			L30-0362-05	AM IFT	EE	
	H	1B		N09-1202-05	TAPPING SCREW (ø3X14)		
	CP1			R90-0187-05	MULTI-COMP 0.22X2 K 5W		
	R41			RD14AB2E330J	FL-PROOF RD 33 J 1/4W		
	R52			RD14GB2E101J	FL-PROOF RD 100 J 1/4W	EE	
	R52			RD14GB2E560J	FL-PROOF RD 56 J 1/4W	KPMX	
	R119,120			RD14AB2E100J	FL-PROOF RD 10 J 1/4W		
	R121,122			RS14DB3D4R7J	FL-PROOF RS 4.7 J 2W		
	R123,124			RS14DB3A561J	FL-PROOF RS 560 J 1W		
	R125			RD14AB2E101J	FL-PROOF RD 100 J 1/4W		
	R130			RS14DB3D122J	FL-PROOF RS 1.2K J 2W		
	R131,132			RS14DB3D680J	FL-PROOF RS 68 J 2W		
	R133,134			RS14DB3D561J	FL-PROOF RS 560 J 2W		
	R144			RD14AB2E4R7J	FL-PROOF RD 4.7 J 1/4W		
⚠	R145			R92-0173-05	RC 2.2M M 1/2W	KP	
	R150		*	RD14AB2E2R7J	FL-PROOF RD 2.7 J 1/4W		
	VR1		*	R12-3097-05	TRIMMING POT.(22K) VCO		
	VR2		*	R12-3099-05	TRIMMING POT.(47K) SEPARATION	EE	
	VR3	1B		R13-5049-05	POTENTIOMETER(200K) BALANCE		
	VR4 ,5	1A,1B		R13-4025-05	POTENTIOMETER(50KX2)BASS,TREB		

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	S1	2B	*	S42-5043-05	MULTIPLE PUSH SWITCH(SELECTOR)		
	S2	2B	*	S42-2128-05	MULTIPLE PUSH SWITCH(SPEAKERS)		
⚠	S3	2B		S31-2083-05	SLIDE SWITCH (POWER TYPE)	M	
	D1			KV1236(Z2)	VARIABLE CAPACITANCE DIODE	KPMX	
	D1 ,2			KV1236(Z2)	VARIABLE CAPACITANCE DIODE	EE	
	D3 ,4			1SS133	DIODE	EE	
	D5 -14			1SS133	DIODE	KPMX	
	D11 -14			1SS133	DIODE	EE	
	D15 ,16			RD13E(B)	ZENER DIODE		
	D17			RD6.2E(B)	ZENER DIODE		
	D18			DSM1A1	DIODE		
	D19 ,20			1SS131	DIODE		
	D19 ,20			1SS178	DIODE		
⚠	D21 -24			GP20DL	DIODE		
	D29			1SS176	DIODE	KPMX	
	D29 -33			1SS133	DIODE	KPMX	
	D30 -33			1SS133	DIODE	EE	
	D3,4			1SS176	DIODE	EE	
	D11-14			1SS176	DIODE		
	D30-33			1SS176	DIODE		
	D5-10			1SS176	DIODE	KPMX	
	IC1			LA1260	IC(FM/AM TUNER)		
	IC2			LA3390	IC(FM MPX)		
	IC3			AN6555	IC(OP AMP X2)	KPMX	
	IC4		*	STK4141/2	IC(AF POWER AMP/ 25W X2)	EE	
	IC4			STK4151/2	IC(AF POWER AMP/ 30W X2)	KPMX	
	Q1			2SC1685(R,S)	TRANSISTOR		
	Q1			2SC2320(E,F)	TRANSISTOR		
	Q1			2SC945(A)(Q,P)	TRANSISTOR		
	Q2			2SC1923(R,S)	TRANSISTOR		
	Q3 ,4			2SK364(GR,BL)	FET	EE	
	Q5 -11			2SC1685(R,S)	TRANSISTOR	EE	
	Q7 -11			2SC1685(R,S)	TRANSISTOR	KPMX	
	Q12			2SA1127NC(R,S)	TRANSISTOR		
	Q12			2SA733(A)(Q,P)	TRANSISTOR		
	Q12			2SA999(E,F)	TRANSISTOR		
	Q13 ,14			2SC1685(R,S)	TRANSISTOR		
	Q15 ,16			2SC2167	TRANSISTOR		
	Q18			2SC1685(R,S)	TRANSISTOR	KPMX	
	Q18			2SC2320(E,F)	TRANSISTOR	KPMX	
	Q18			2SC945(A)(Q,P)	TRANSISTOR	KPMX	
	Q5,6			2SC2320(E,F)	TRANSISTOR	EE	
	Q5,6			2SC945(A)(Q,P)	TRANSISTOR	EE	
	Q13,14			2SC2320(E,F)	TRANSISTOR		
	Q13,14			2SC945(A)(Q,P)	TRANSISTOR		
	Q7-11			2SC2320(E,F)	TRANSISTOR		
	Q7-11			2SC945(A)(Q,P)	TRANSISTOR		
	PREAMP (X85-1030-10)						
	C1 ,2			CE04FW1C100M	ELECTRO 10UF 16WV		
	C3 ,4			CE04FW1A470M	ELECTRO 47UF 10WV		
	C5 ,6			CF92FV1H123J	MF 0.012UF J		
	C7 ,8			CF92FV1H332J	MF 3300PF J		
	C9 ,10			CE04FW1H2R2M	ELECTRO 2.2UF 50WV		
	C11 ,12			CK45FF1H103Z	CERAMIC 0.010UF Z		

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C15 ,16			CK45FB1H222K	CERAMIC 2200PF K	EE	
C15 ,16			CK45FB1H561K	CERAMIC 560PF K	KPMX	
C17 ,18			CC45FSL1H101J	CERAMIC 100PF J	KPMX	
C17 ,18			CC45FSL1H221J	CERAMIC 220PF J	EE	
IC1			AN6556	IC(OP AMP X2)		
IC1			M5218P	IC(OP AMP X2)		
FRONT END (X86-1010-10)						
C1		*	C91-0713-05	CERAMIC 2.2PF K	EE	
C1		*	C91-0716-05	CERAMIC 3.9PF K	KPMX	
C2			CC45FSL1H470J	CERAMIC 47PF J		
C4			C91-0757-05	CERAMIC 0.001UF K		
C5		*	CC45FSL1H090D	CERAMIC 9.0PF D	EE	
C6			CC45FSL1H060D	CERAMIC 6.0PF D	EE	
C6 ,7		*	C91-0716-05	CERAMIC 3.9PF K	KPMX	
C7		*	C91-0716-05	CERAMIC 3.9PF K	EE	
C8		*	C91-0720-05	CERAMIC 8.2PF K		
C9			C91-0749-05	CERAMIC 220PF K		
C10 ,11			C91-0769-05	CERAMIC 0.01UF M		
C12			CC45FSL1H020C	CERAMIC 2.0PF C	EE	
C13			C91-0709-05	CERAMIC 1PF M	KPMX	
C13		*	C91-0713-05	CERAMIC 2.2PF K	EE	
C14		*	CC45FUJ1H080D	CERAMIC 8.0PF D		
C15		*	C91-0725-05	CERAMIC 15PF J		
C16			C91-0733-05	CERAMIC 33PF J		
C17			C91-0769-05	CERAMIC 0.01UF M		
C18		*	C91-0713-05	CERAMIC 2.2PF K		
C19			CE04FW1C470M	ELECTRO 47UF 16WV		
C20			CC45FSL1H470J	CERAMIC 47PF J		
TC1			C05-0302-05	CERAMIC TRIMMER CAPACITOR(11PF		
L1			L31-0512-05	FM-RF COIL		
L2			L31-0513-05	FM-RF COIL		
L3			L31-0515-05	FM-RF COIL		
L4			L31-0514-05	FM-RF COIL	KPMX	
L4 ,5			L31-0514-05	FM-RF COIL	EE	
L6			L40-1092-14	SMALL FIXED INDUCTOR(1UH,M)		
L7		*	L30-0427-05	FM IFT		
L8		*	L32-0318-05	FM OSCILLATING COIL		
R16			RD14GB2E101J	FL-PROOF RD 100 J 1/4W		
D1 -4			KV1310-4	VARIABLE CAPACITANCE DIODE	EE	
D1 ,2			KV1310-3	VARIABLE CAPACITANCE DIODE	KPMX	
D4			KV1310-3	VARIABLE CAPACITANCE DIODE	KPMX	
Q1			2SK161(GR)	FET	KPMX	
Q1		*	2SK241	FET	EE	
Q2			2SC1923(O)	TRANSISTOR		
Q3			2SK161(Y,GR)	FET	EE	
Q4 ,5			2SC1923	TRANSISTOR		

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KR-A10

SPECIFICATIONS

(IHF '66)

Audio Section

Power Output

30 watts per channel minimum RMS, both channels driven at 8 ohms from 40 Hz to 20 kHz with no more than 0.5% total harmonic distortion.

Both channels driven	
Into 8 ohms at 1 kHz	34W + 34W
Into 4 ohms at 1 kHz	40W + 40W
Total harmonic distortion (40 Hz to 20 kHz)	
rated power into 8 ohms	0.5%
1/2 rated power into 8 ohms, 1 kHz	0.1%
Intermodulation distortion (60 Hz : 7 kHz = 4 : 1 SMPTE)	
rated power into 8 ohms	0.4%
Input sensitivity/impedance	
PHONO	2.5 mV/47k ohms
TAPE, CD/AUX	150 mV/47k ohms
Signal-to-noise ratio (IHF-A)	
PHONO	73 dB for 2.5mV input
CD/AUX, TAPE	90 dB for 150 mV input
Frequency response	
PHONO RIAA standard curve	20 Hz to 20 kHz ± 0.5 dB
TAPE, CD/AUX	15 Hz to 70 kHz −3 dB
Tone control	
BASS	± 10 dB at 100 Hz
TREBLE	± 10 dB at 10 kHz
Loudness control (VOL. – 30 dB)	+ 8 dB at 100 Hz
Output level/impedance	
TAPE REC OUT (Pin)	150 mV/1.5k ohms

FM Tuner Section

Usable sensitivity	10.8 dBf (1.9 μV)
50 dB quieting sensitivity	
Mono	17.2 dBf (4 μV)
Stereo	37.2 dBf (40 μV)
Signal-to-noise ratio at 65 dBf	
Mono	76 dB
Stereo	70 dB
Total harmonic distortion at 1 kHz	
Mono	0.2%
Stereo	0.3%
Frequency response	30 Hz to 15 kHz +0 dB, −2.5 dB
Capture ratio	1.2 dB
Image rejection ratio	40 dB
Spurious rejection ratio	73 dB
IF rejection ratio	95 dB
Alternate channel selectivity	53 dB at ± 400 kHz
AM suppression ratio	57 dB
Stereo separation ratio	40 dB at 1 kHz
Subcarrier suppression ratio	35 dB
Antenna impedance	300 ohms balanced and 75 ohms unbalanced
FM frequency range	87.5 MHz to 108 MHz

AM Tuner Section

Usable sensitivity	15 μV (500 μV/m)
Signal-to-noise ratio	52 dB
Image rejection	35 dB
Selectivity	35 dB

General

Power requirement	120V AC, 60 Hz (USA and Canada) 240V AC, 50 Hz (Australia) 110-120 V/220-240 V 50/60 Hz switchable (Other countries)
Power consumption	150W
Dimensions	W: 420 mm (16-9/16") H: 109 mm (4-5/16") D: 231.5 mm (9-1/8")
Weight (Net)	5.3 kg (11.7 lb)

Note:

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

Note :

Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on, the U.S.A. (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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