KENWOOD

HI/FI STEREO COMPONENTS

SERVICE MANUAL

KT-313
(KT-3133)

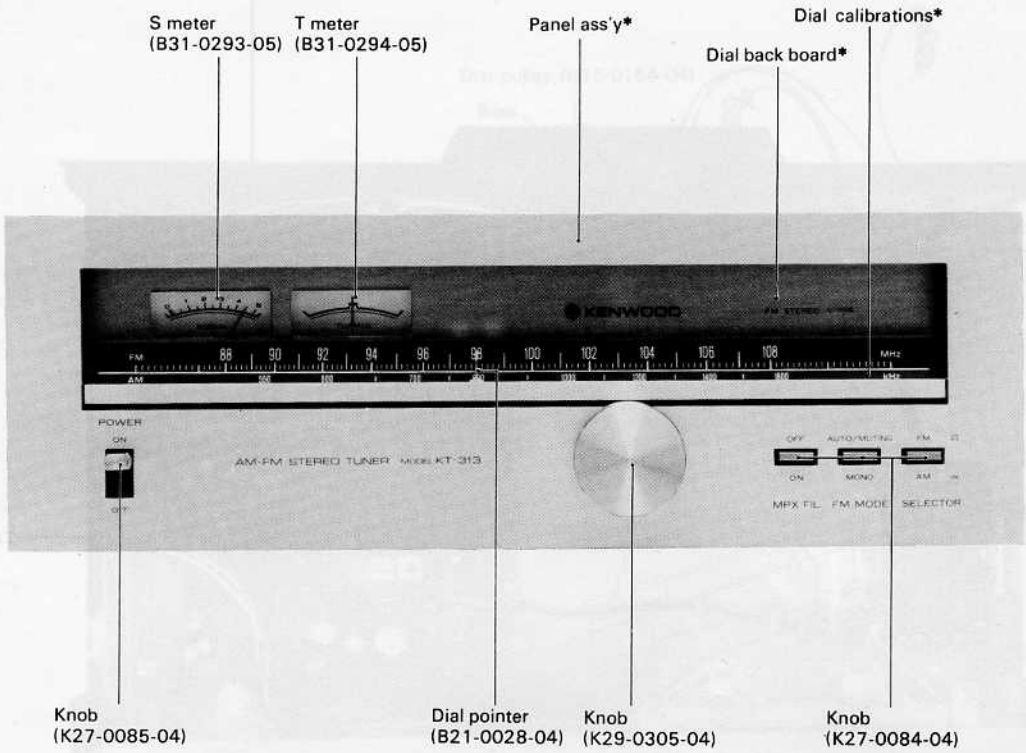
AM-FM STEREO TUNER

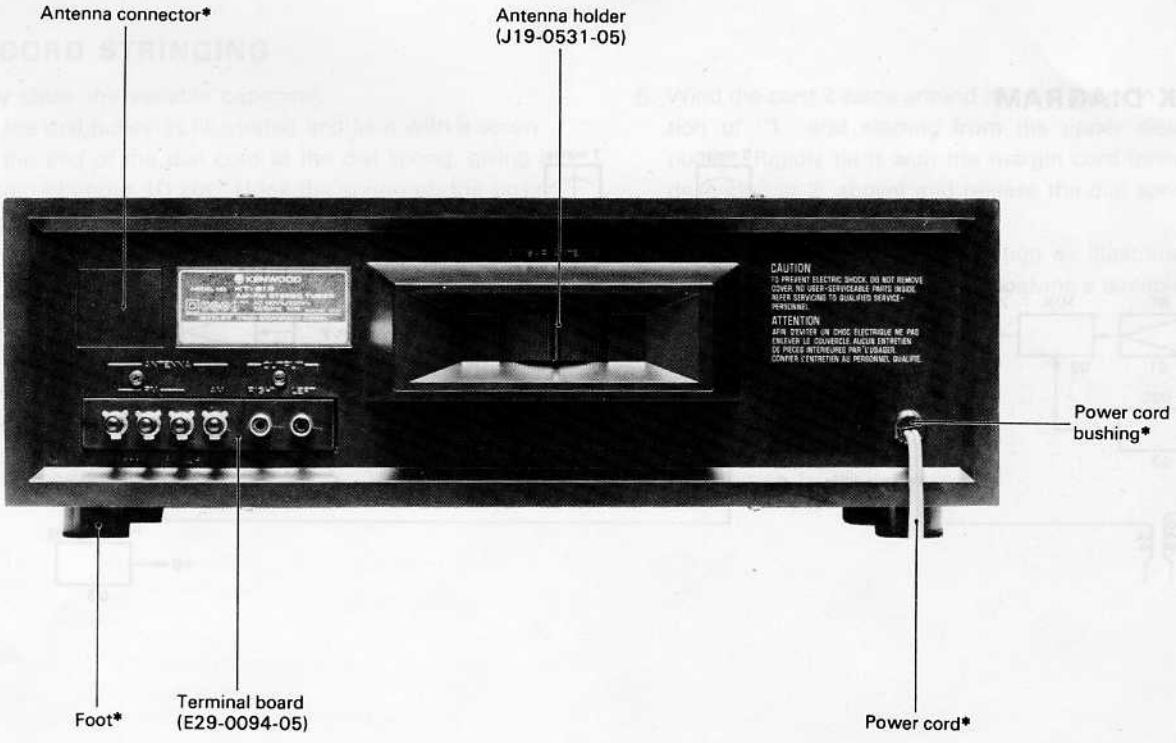
CONTENTS

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.

Region	Code
U.S.A.	K
Canada	P
PX	U
Australia	X
Europe and Scandinavia	E
England	T
South Africa	S
Other Areas	M
Audio Club (KT-3133)	H

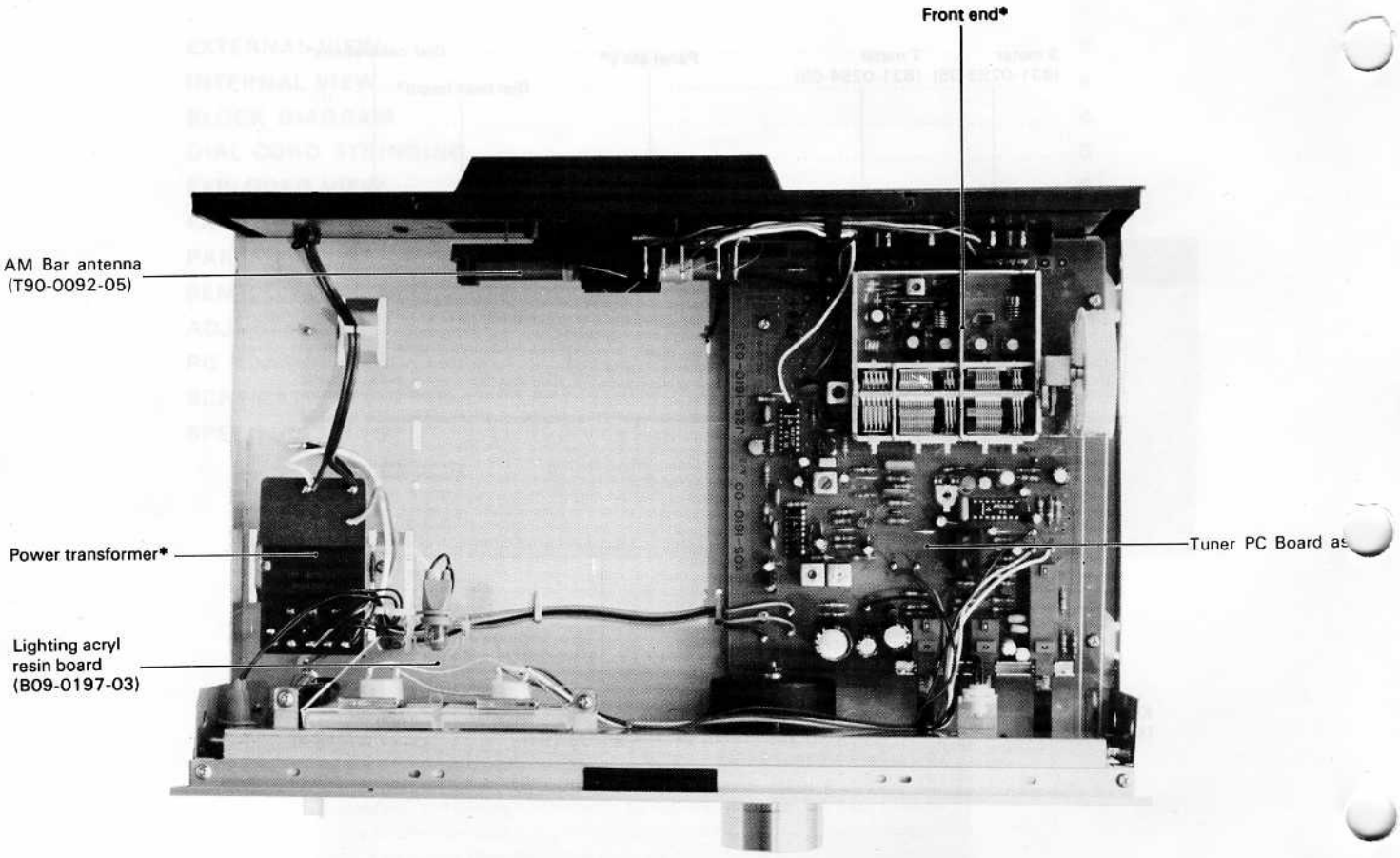
EXTERNAL VIEW





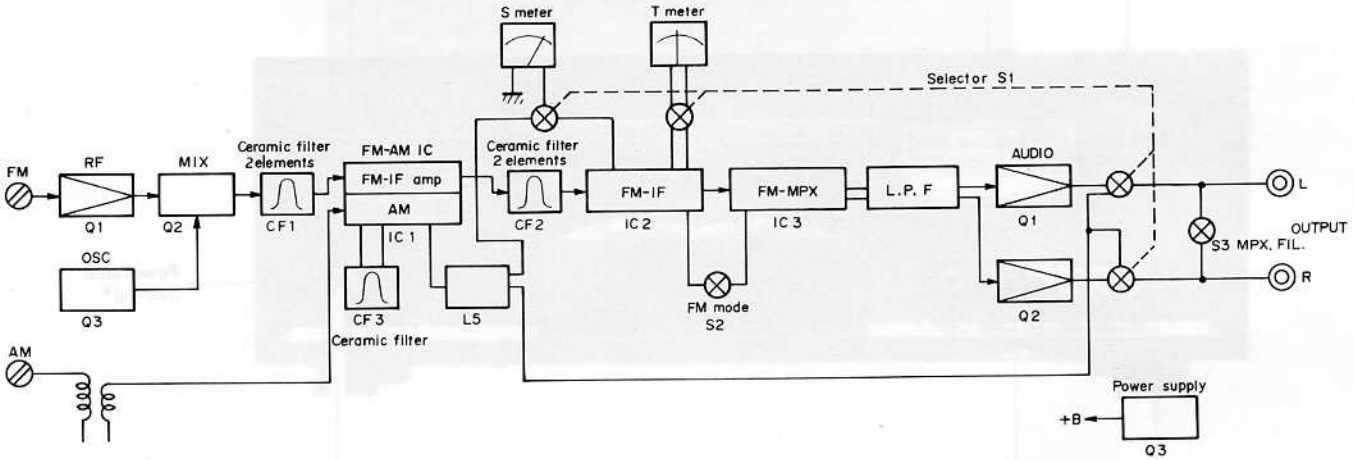
* Refer to Parts List.

INTERNAL VIEW/BLOCK DIAGRAM

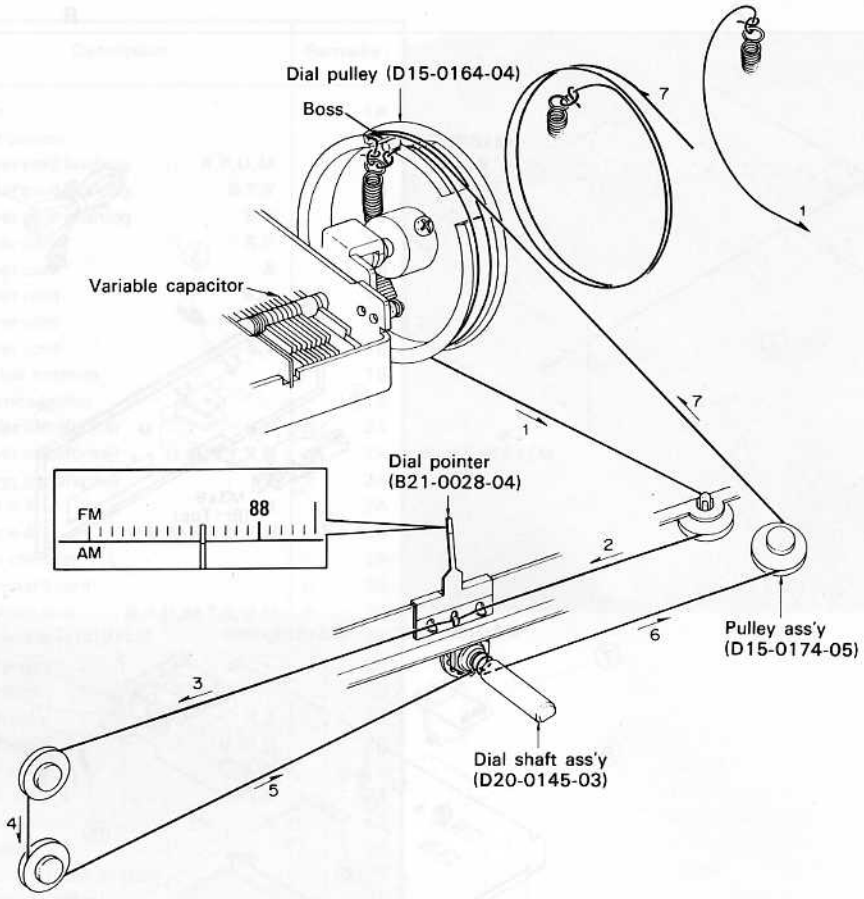


* Refer to Parts List.

BLOCK DIAGRAM



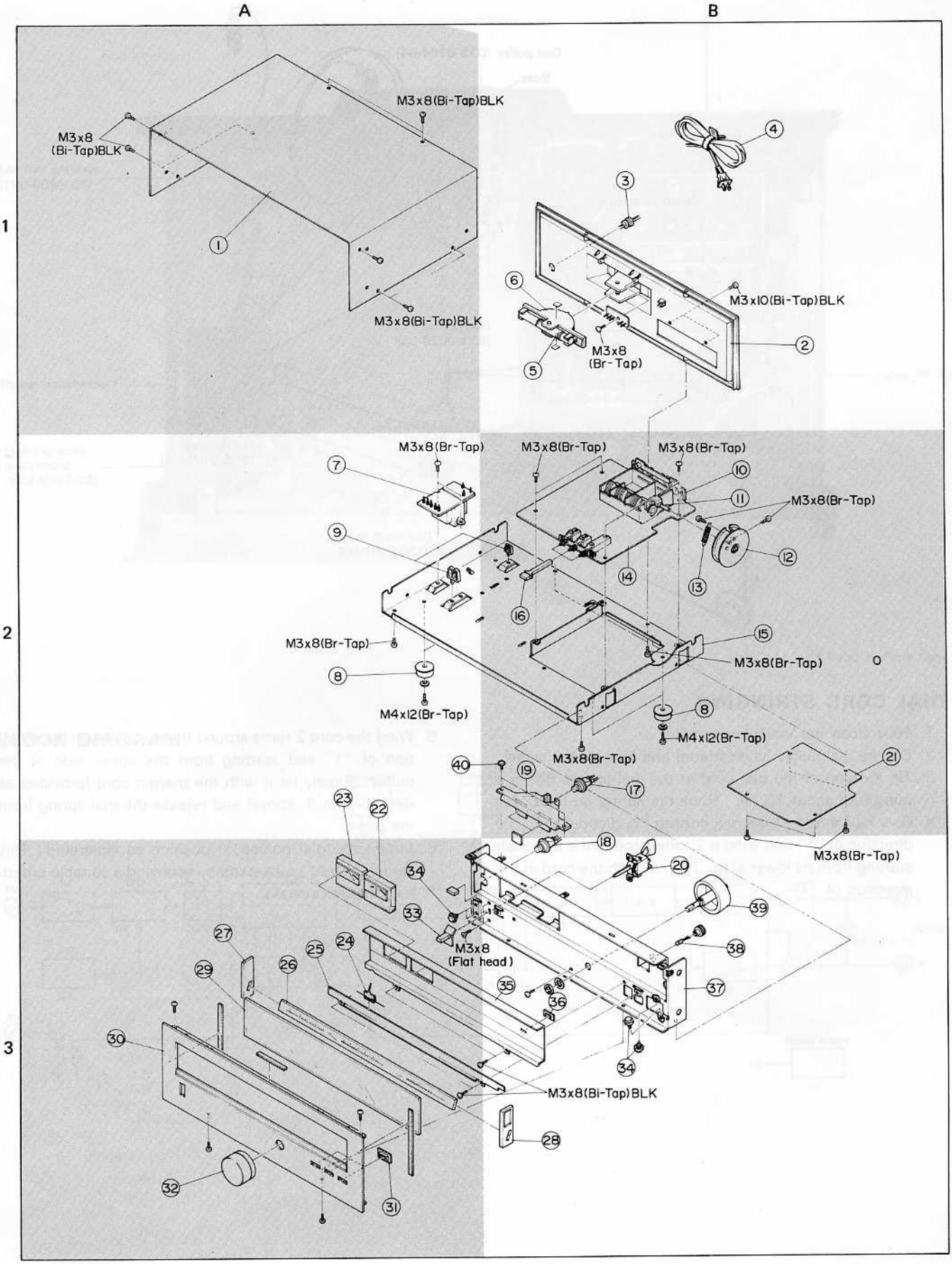
DIAL COAD STRINGING



DIAL CORD STRINGING

1. Fully close the variable capacitor.
2. Set the dial pulley as illustrated and fix it with a screw.
3. Tie the end of the dial cord at the dial spring, giving a margin of about 10 cm. Hook the spring on the boss.
4. Give half a turn of the dial cord to the dial pulley in the direction of "1" and wind it 2 turns around the dial shaft starting from its lower side. Then stretch the cord in the direction of "7".
5. Wind the cord 2 turns around the dial pulley in the direction of "1" and starting from the upper side of the pulley. Rigidly tie it with the margin cord (provided as described in 3. above) and release the dial spring from the boss.
6. Mount the dial pointer in position as illustrated. This setting should be checked by receiving a suitable broadcast station actually.

EXPLODED VIEW



EXPLODED VIEW PARTS LIST

☆ : New Parts

Fig. No.	Parts No.	Description		Remarks	
1	A01-0350-03	Case			1A
2	—	Rear pannel			1B
3	J42-0072-05	Power cord bushing	K,P,U,M		1B
	J42-0074-05	Power cord bushing	S,T,X		1B
	J41-0017-05	Power cord bushing	E,H		1B
4	E30-0181-05	Power cord	K,P		1B
	E30-0185-05	Power cord	X		1B
	E30-0459-05	Power cord	E,H		1B
	E30-0545-05	Power cord	U,M		1B
	E30-0602-05	Power cord	S,T		1B
5	T90-0092-05	AM bar antenna			1B
6	J19-0531-05	Antenna holder			1B
7	L01-1651-05	Power transformer	K,P	☆	2A
	L01-1654-05	Power transformer	U,M,S,T,X,H	☆	2A
	L01-1657-05	Power transformer	E	☆	2A
8	J02-0073-04	Foot × 4	K		2A
	J02-0049-14	Foot × 4	P,U,M,S,T,X,E,H		2A
9	—	Wire cramper			2A
10	E29-0094-05	Terminal board		☆	2B
11	W02-0017-05	FM front end	K,P,U,M,T,X,U,H	☆	2B
	W02-0018-05	FM front end	S	☆	2B
12	D15-0164-04	Dial pulley			2B
13	G01-0045-24	Dial spring			2B
14	X05-1610-12	PCB ass'y	K,P		2B
	X05-1610-11	PCB ass'y	U,M,H		2B
	X05-1610-41	PCB ass'y	S		2B
	X05-1610-61	PCB ass'y	T,E		2B
	X05-1610-71	PCB ass'y	X		2B
15	—	Chassis			2B
16	K27-0084-04	Knob × 3 (Push switch)			2B
17	B30-0165-05	Pilot lamp (Blue)		☆	2B
18	B30-0165-05	Pilot lamp (Blue)		☆	2B
19	B19-0197-03	Lighting acryl resin board			2B
20	S33-1006-05	Power switch	K,P		3B
	S33-1007-05	Power switch	U,M,S,X,H		3B
	S33-2032-05	Power switch	T,E		3B
21	—	Bottom plate			2B
22	B31-0294-05	T meter		☆	3A
23	B31-0293-05	S meter			3A
24	B21-0028-04	Dial pointer			3A
25	—	Dial pointer rail		☆	3A
26	B20-0427-04	Dial calibrations	K,P,U,M,T,X,E,H	☆	3A
	B20-0428-04	Dial calibrations	S	☆	3A
27	—	Dial calibrations holder, L			3A
28	—	Dial calibrations holder, R			3B
29	—	Front glass (Panel ass'y)		☆	3A
30	—	Panel (Panel ass'y)		☆	3A
31	—	Escutcheon (Panel ass'y)		☆	3A
29-31	A20-1346-03	Panel ass'y	K,P,U,M,S,T,X,E	☆	3A
	A20-1415-03	Panel ass'y	H	☆	3A
32	K29-0305-04	Knob (Tuning)		☆	3A
33	K27-0085-04	Knob (Power switch)		☆	3A
34	D15-0174-05	Pulley ass'y × 4		☆	3A
35	A30-0159-03	Dial back board	K,P,U,M,S,X,U,H	☆	3A
	A30-0167-03	Dial back board	T	☆	3A
36	—	Indicator		☆	3B
37	—	Sub panel		☆	3B
38	B30-0127-05	Pilot lamp (Stereo indicator)			3B
39	D20-0145-03	Dial shaft ass'y		☆	3B
40	N09-0287-05	Screw (Lighting acryl resin board)			2A

PARTS LIST

☆ : New parts
FP: Flame proof
RD: Carbon film resistor
RC: Carbon composition resistor
RW: Wire wound power resistor
RN: Metal film resistor
RS: Metal oxide film resistor

The parts No. of the resistor and the capacitor is changed into computer code.

TOTAL

Ref. No.	Parts No.	Description	Remarks
—	A01-0350-03	Case	
—	A20-1346-03	Panel ass'y **K,P,U,M,S,T,X,E**	☆
—	A20-1415-03	Panel ass'y **H**	☆
—	A30-0159-03	Dial back board **K,P,U,M,S,X,E,H**	☆
—	A30-0167-03	Dial back board **T**	☆
—	B19-0197-03	Lighting acryl resin board	
—	B20-0427-04	Dial calibrations **K,P,U,M,T,X,E,H**	☆
—	B20-0428-04	Dial calibrations **S**	☆
—	B21-0028-04	Dial pointer	
—	B30-0127-05	Pilot lamp	
—	B30-0165-05	Pilot lamp × 2 (Blue)	☆
—	B31-0293-05	S meter	☆
—	B31-0294-05	T meter	☆
—	B46-0055-20	Warranty card **P**	
—	B46-0060-00	Warranty card **T**	
—	B46-0061-20	Warranty card **K**	
—	B46-0062-20	Warranty card **U,H**	
—	B46-0063-00	Warranty card **U**	
—	B46-0064-00	Warranty card **X**	
—	B50-1791-00	Instruction manual **K,U,S,X**	☆
—	B50-1792-00	Instruction manual **P,M**	☆
—	B50-1793-00	Instruction manual **T**	☆
—	B50-1794-00	Instruction manual **E**	☆
—	B50-1849-00	Instruction manual **H**	☆
—	B59-0018-00	Guide book **U**	
C1,2	C54-3310-39	Ceramic 0.01μF 250WV **T,E**	
C1	C90-0145-05	Film 0.01μF 250WV or **K**	
	C91-0001-05	Ceramic 0.01μF 250WV	
C1	C91-0023-05	Ceramic 0.01μF 250WV **U,M,S,X,H**	
C1	C91-0025-05	Ceramic 0.01μF 250WV **P**	
—	D15-0164-04	Dial pulley	
—	D15-0174-05	Pulley ass'y × 4	☆
—	D20-0145-03	Dial shaft ass'y	☆
—	E04-0004-05	Antenna connector **E**	
—	E30-0181-05	Power cord **K,P**	
—	E30-0185-05	Power cord **X**	
—	E30-0459-05	Power cord **E,H**	
—	E30-0505-05	Audio cord	
—	E30-0545-05	Power cord **U,M**	
—	E30-0602-05	Power cord **S,T**	
—	G01-0045-24	Dial spring	
—	H01-1839-04	Carton box **K,U,M,S,X,E**	☆
—	H01-1840-04	Carton box **P**	☆
—	H01-1841-04	Carton box **T**	☆
—	H01-1889-04	Carton box **H**	☆
—	H10-1523-02	Buffer fixture	
—	H20-0417-04	Polyethylene cover **M**	
—	H20-0451-04	Polyethylene cover **K,P,U,S,T,X,H**	☆
—	H25-0078-04	Polyethylene bag (Instruction)	
—	H25-0148-04	Polyethylene bag (Audio cord)	
—	J02-0049-14	Foot × 4 **P,U,M,S,T,X,E,H**	
—	J02-0073-04	Foot × 4 **K**	
—	J19-0531-05	Antenna holder	
—	J41-0017-05	Power cord bushing **E,H**	
—	J42-0072-05	Power cord bushing **K,P,U,M**	
—	J42-0074-05	Power cord bushing **S,T,X**	
—	J61-0045-15	Combex **E**	
—	K27-0084-04	Knob × 3 (Push switch)	☆
—	K27-0085-04	Knob × 3 (Power switch)	☆
—	K29-0305-04	Knob × 3 (Tuning)	☆
—	L01-1651-05	Power transformer **K,P**	☆
—	L01-1654-05	Power transformer **U,M,S,T,X,H**	☆
—	L01-1657-05	Power transformer **E**	☆
R1	R92-0173-05	Metal oxide film 10Ω 1W 5%	
R2	R47-1410-05	Metal oxide film 2.2MΩ 1W 5% **K,P**	
S2	S31-2050-05	Slide switch (Power voltage selector) **U,M,S,X,E,H**	
S1	S33-1006-05	Power switch **K,P**	
S1	S33-1007-05	Power switch **U,M,S,X,H**	
S1	S33-2032-05	Power switch **T,E**	
—	T90-0092-05	AM Bar antenna	☆
—	T90-0202-05	FM Indoor antenna	
—	X05-1610-11	PCB ass'y **U,M,H**	☆
—	X05-1610-12	PCB ass'y **K,P**	☆
—	X05-1610-41	PCB ass'y **S**	☆
—	X05-1610-61	PCB ass'y **T,E**	☆
—	X05-1610-71	PCB ass'y **X**	☆

TUNER (X05-1610-12)

Ref. No.	Parts No.	Description	Remarks
C1～4	C55-1710-38	Ceramic 0.01μF +80%−20%	
C5	C24-1710-51	Electrolytic 1μF 50WV	
C6	C71-1710-15	Ceramic 100pF ±5%	
C7	C24-1710-51	Electrolytic 1μF 50WV	
C8	C24-1733-51	Electrolytic 3.3μF 50WV	
C9	C24-1710-51	Electrolytic 1μF 50WV	
C10,11	C55-1710-38	Ceramic 0.01μF +80%−20%	
C12	C46-1747-35	Mylar 0.047μF ±5%	
C13	C24-1210-61	Electrolytic 10μF 16WV	
C14	C48-1747-15	Polystylene 470pF ±5%	
C15	C25-1747-47	Electrolytic 0.47μF 50WV	
C16	C25-1722-47	Electrolytic 0.22μF 50W	
C17～19	C24-1710-51	Electrolytic 1μF 50WV	
C20,21	C46-1715-35	Mylar 0.015μF ±5% **T,X,E**	
	C46-1722-35	Mylar 0.022μF ±5% **K,P,U,M,S,H**	
C22,23	C25-1722-47	Electrolytic 0.22μF 50WV	
C24	C60-1718-05	Ceramic 18pF ±5%	
C25	C48-1736-15	Polystylene 360pF ±5%	
C26	C55-1710-38	Ceramic 0.01μF +80%−20%	
C27,28	C55-1722-38	Ceramic 0.022μF +80%−20%	
C29	C24-1210-61	Electrolytic 10μF 16WV	
C30,31	C24-1722-51	Electrolytic 2.2μF 50WV	

PARTS LIST/SEMICONDUCTOR SUBSTITUTIONS

Ref. No.	Parts No.	Description	Re-marks
C32,33	C55-1710-38	Ceramic 0.01μF +80%−20%	
C34	C46-1768-36	Mylar 0.068μF ±10%	
C35	C24-1722-51	Electrolytic 2.2μF 50WV	
C36	C24-1410-81	Electrolytic 1000μF 25WV	
C37	C24-1247-71	Electrolytic 470μF 16WV	
C38	C24-1222-71	Electrolytic 220μF 16WV	
C39	C46-1712-36	Mylar 0.012μF ±10%	
C40	C24-1010-71	Electrolytic 100μF 10WV	
C41	C24-1047-61	Electrolytic 47μF 10WV	
C42	C24-1010-71	Electrolytic 100μF 10WV	
L1	L30-0316-05	FM-IFT	
L2	L30-0317-05	FM-IFT	
L3	L32-0191-05	AM-OSC coil	
L4	L30-0307-05	AM-IFT	
L5	L30-0275-05	AM-IFT or	
	L30-0283-05	AM-IFT	
CF1,2	L72-0059-05	Ceramic filter **T,X**	
	L72-0068-05	Ceramic filter **K,P,U,M,S,E,H**	
CF3	L72-0069-05	Ceramic filter	
FL1	L79-0072-05	Low pass filter or	
	L79-0087-05	Low pass filter	
FL2	L79-0073-05	9kHz Notch filter **U,M,S,T,X,E,H**	
VR1	R12-2014-05	Potentiometer 5kΩ (B) VCO or	
	R12-2016-05	Potentiometer 5kΩ (B) VCO	
R11	R43-1268-05	FP-RD 68Ω ±5% 1/4W	
R14	R40-8215-16	RC 150Ω ±10% 1/2W	
R39,41	R43-1222-15	FP-RD 220Ω ±5% 1/4W	
R44	R43-1210-05	FP-RD 10Ω ±5% 1/4W	
R45	R43-1212-15	FP-RD 120Ω ±5% 1/4W	
CR1	R90-0104-05	CR parts (R37, C31, C32)	
S1～3	S42-3024-05	Push switch	
Q1,2	V01-0564-30	Transistor 2SA564 (Q, R) or	
	V01-0733-30	Transistor 2SA733 (A) (Q,R)	
Q3	V03-0373-05	Transistor 2SC1384 (Q,R)	
D1	V11-0076-05	Diode 1S1555 or	
	V11-0271-05	Diode 1S2076	
D2	V11-0051-05	Diode 1N60	
D3	V11-0387-05	Diode EQA01-12 (R) or	
	V11-4104-30	Diode WZ-115	
D4,5	V11-0295-05	Diode W06B	
IC1	V30-0270-10	IC AN217P	
IC2	V30-0246-10	IC AN377	
IC3	V30-0270-40	IC AN363N	

SEMICONDUCTOR SUBSTITUTIONS

Ref. No.	Semiconductor Name	Semidonductor Substitutions
Q1	2SK55	2SK61
Q2	2SC535	2SC1923, 2SC381
Q3	2SC461	2SC1342
Q1, 2	2SA733A (Q, R) 2SA564A (Q, R)	2SA640
Q3	2SC1384 (Q, R)	2SC1735, 2SD438MP
IC1	AN217P	AN217BB
IC2	AN377	HA1137W
IC3	AN363N	—

ADJUSTMENT

INSTRUMENTS USED

Oscilloscope ..... OSC
AM signal generator ..... AM-SG
FM signal generator ..... FM-SG
Audio generator ..... AG
Solid state voltmeter ..... SSVM
FM multiplex generator ..... FM-MPS
Frequency counter

NOTES FOR ADJUSTMENT

* Repeat tracking adjustments 2 or 3 times and finally confirm the result using respective local stations.
* The check points are shown on both circuit diagram and printed circuit board diagram.
* 0 dB = 1 μV
* FM tracking on lower side cannot be adjusted since a fixed coil is employed.

ORDER	ITEM	INSTRUMENT		TUNER SETTING	OUTPUT	ADJUSTMENT POINTS	ADJUSTMENT METHOD
		CONNECTION	SETTING				
FM SECTION							
1	IFT	Ⓐ	95 MHz 60 dB 1 kHz (Mod) 75 kHz (Dev)	95 MHz	Ⓑ	T1 (W02-0017-05) or (W02-0018-05)	Maximum optimum waveform, minimum distortion
2	DISCRI	—	—	—	T meter	L1	Meter indication in the center
3		Ⓐ	95 MHz 60 dB 1 kHz (Mod) 75 kHz (Dev)	95 MHz	Ⓑ	L2	Maximum optimum waveform, minimum distortion
4	TRACKING	Ⓐ	106 MHz (Dev) 1 kHz (Mod) 75 kHz (Dev)	106 MHz	Ⓑ	TCA, TCR, TCO	Maximum optimum waveform
5	VCO	Ⓐ	95 MHz 60 dB 0 (Dev)	95 MHz	Ⓒ	VR1	Adjusted to 19 kHz ±50 Hz
AM SECTION							
1	IF	Ⓓ	1000 kHz 400 Hz 30% (Mod) 100 dB	1000 kHz	Ⓑ	L4, L5	Maximum optimum waveform, minimum distortion
2	TRACKING	Ⓓ	600 kHz 400 Hz 30% (Mod) 100 dB	600 kHz	Ⓑ	L3 Bar antenna	Maximum optimum waveform, minimum distortion
3			1400 kHz 400 Hz 30% (Mod) 100 dB	1400 kHz		TC2, 4	

REGLAGES

INSTRUMENTS USITE

Oscilloscope ..... OSC
Générateur MA ..... AM-SG
Générateur MF ..... FM-SG
Générateur Audio fréquences ..... AG
Voltmètre à transistor ..... SSVM
Générateur multiplex stéréo ..... FM-MPX
Compteur de fréquence

REMARQUES DE REGLAGES

- Renouveller plusieurs fois le réglage de reproduction et confirmer la réception de l'émission.
- Le point de contrôle est indiqué sur le schéma de montage et le tracé du circuit imprimé.
- 0 dB = 1 μV
- Comme on utilise une bobine fixée, l'alignement sur band latérale inferieure n'est pas possible.

Nº	ALIGNEMENT	APPAREILLAGE		REGLAGE DE TUNER	INDICATEUR DE SORTIE	POINTS DE REGLAGES	REMARQUES
		RACCORDEMENT	REGLAGE				
MF							
1	FI	Ⓐ	95 MHz 1 kHz (Modulation) 75 kHz (Déviation) 60 dB (Entrée d'antenne)	95 MHz	Ⓑ	T1 (W02-0017-05) ou (W02-0018-05)	Déviation maximale, distorsion minimale
2	DISCRIMINATEUR	—	—	—	Indicateur T-Mètre à zéro central	L1	Aiguille de indicateur à zéro central en position centrale
3	DISCRIMINATEUR	Ⓐ	95 MHz 1 kHz (Modulation) 75 kHz (Déviation)	95 MHz	Ⓑ	L2	Déviation maximale, distorsion minimale
4	ALIGNEMENT	Ⓐ	106 MHz 1 kHz (Modulation) 75 kHz (Déviation)	106 MHz	Ⓑ	TCA,TCAR,TCO	Déviation maximale,
5	OSCILLATEUR VCO 19 KHz	Ⓐ	95 MHz 0 (Déviation) 60 dB (Entrée d'antenne)	95 MHz	Ⓒ	VR1	Ajuster oscillateur sur 19 kHz±50 Hz
MA							
1	FI	Ⓓ	1000 kHz 400 Hz, 30% (Modulation) 100 dB (Entrée d'antenne)	1000 kHz	Ⓑ	L4,L5	Déviation maximale, distorsion minimale
2	ALIGNEMENT	Ⓓ	600 kHz 400 Hz, 30% (Modulation) 100 dB (Entrée d'antenne)	600 kHz	Ⓑ	L3, ANTENNE-FERRITE MA	Déviation maximale, distortion minimale
3	ALIGNEMENT	Ⓓ	1400 kHz 400 Hz, 30% (Modulation) 100 dB (Entrée d'antenne)	1400 kHz	Ⓑ	TC2,4	Déviation maximale, distortion minimale

ABGLEICH

PRÜFEINRICHTUNGEN

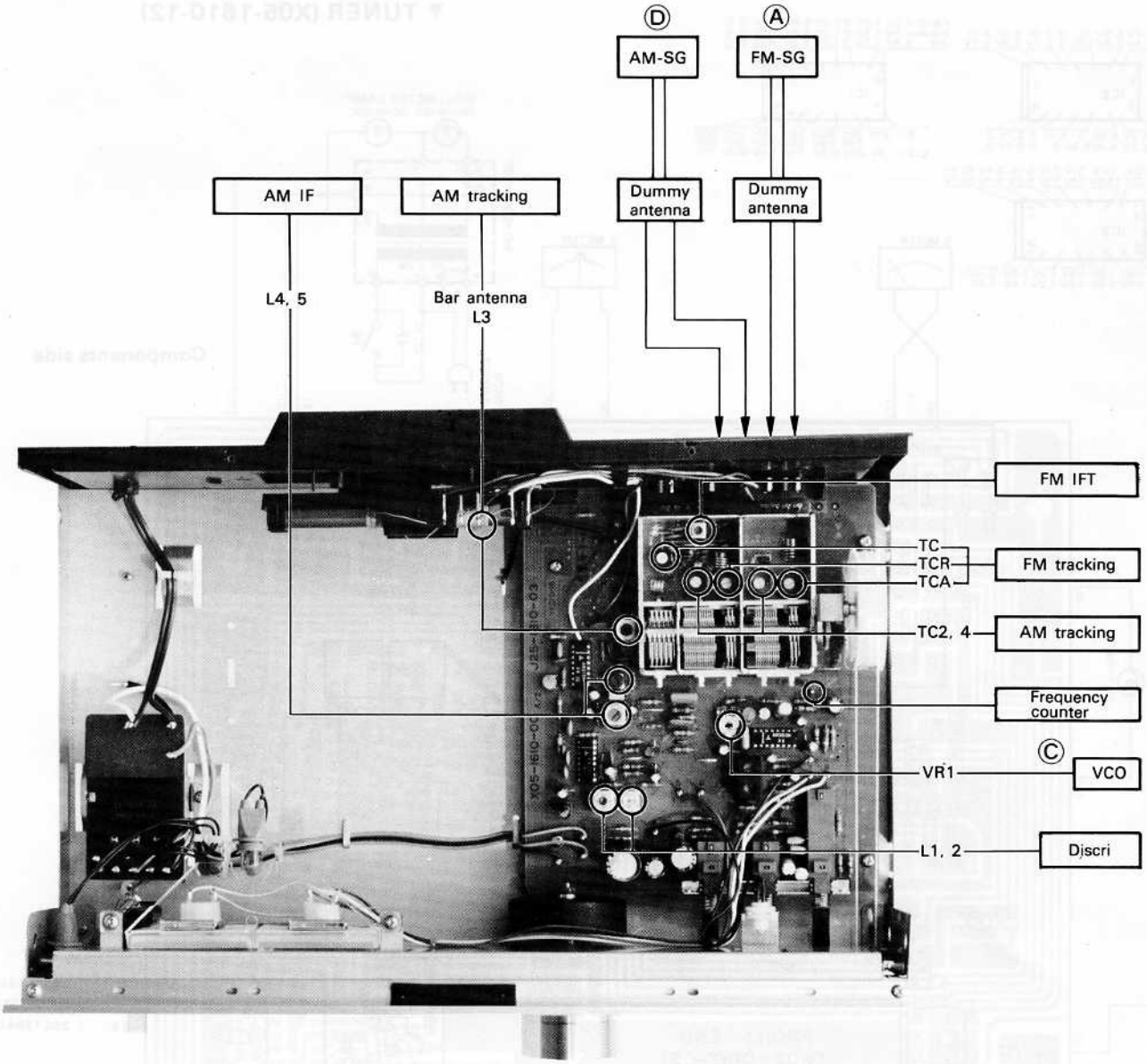
Oszilloskop ..... OSC
HF-Signalgenerator ..... M-SG
NF-Signalgenerator ..... AG
Transistor-Voltmeter ..... SSVM
Multiplex-Signalgenerator ..... FM-MPX
Frequenzzähler

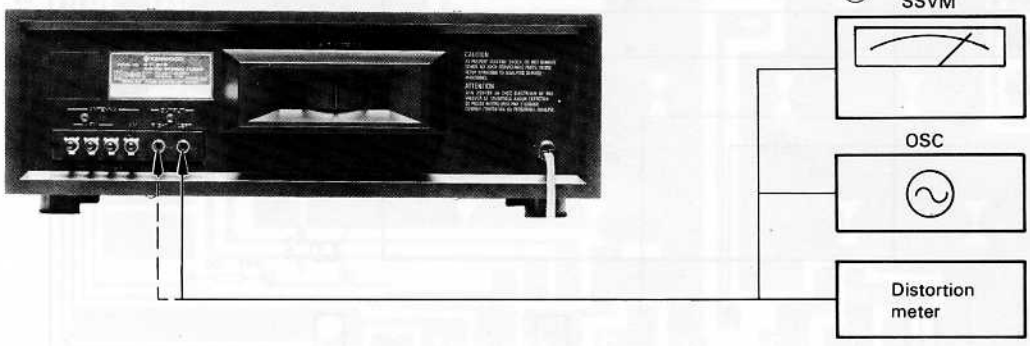
HINWEISE

- Den Empfangsbereich einige Male einstellen und den Empfang überprüfen.
- Der Prüfpunkt (TP) ist im Schaltplan auf geführt.
- 0 dB = 1 μV
- Die UKW-Empfangsbereich auf der unteren Seite kann nicht geregelt werden, weil eine Festspule verwendet wird.

NR.	ABGLEICH	PRÜFEINRICHTUNG		TUNER EINSTELLUNG	AUSGANGS-ANZEIGE	EINSTELL-PUNKT	BEMERKUNGE
		ANSCHLÜSSE	EINSTELLUNG				
UKW-EMPFANGSABTEILUNG							
1	ZF-T	Ⓐ	95 MHz 1 kHz, ±75 kHz (Hub) 60 dB	95 MHz	Ⓑ	T1 (W02-0017-05) order (W02-0018-05)	Maximaler Ausschlag und Minimaler Klirr
2	DISKRIMI-NATOR	—	—	—	KANALMITTEN ANZEIGER	L1	Den Zeiger des Kanalmitten-Anzeiger mittig einstellen
3	DISKRIMI-NATOR	Ⓐ	95 MHz 1 kHz, ±75 kHz (Hub) 60 dB	95 MHz	Ⓑ	L2	Minimaler Klirr
4	EMPFANGS-BEREICH	dito	106 MHz 1 kHz, ±75 kHz (Hub)	106 MHz	dito	TCA,TCR,TCO	Maximaler Ausschlag
5	SPANNUNGS-GEREGELTER OSZILLATOR	dito	95 MHz 0 (Hub) 60 dB	95 MHz	Ⓒ	VR1	19 kHz
MW-EMPFANGSABTEILUNG							
1	ZF	Ⓓ	1000 kHz 400 Hz, 30% Modulation	1000 kHz	Ⓑ	L4, L5	Maximaler Ausschlag und Minimaler Klirr
2	EMPFANGS-BEREICH	Ⓓ	600 kHz 400 Hz, 30% Modulation	600 kHz	Ⓑ	L3 MW-Ferritantenne	Maximaler Ausschlag
3	EMPFANGS-BEREICH	Ⓓ	1400 kHz 400 Hz, 30% Modulation	1400 kHz	Ⓑ	TC2, TC4	dito

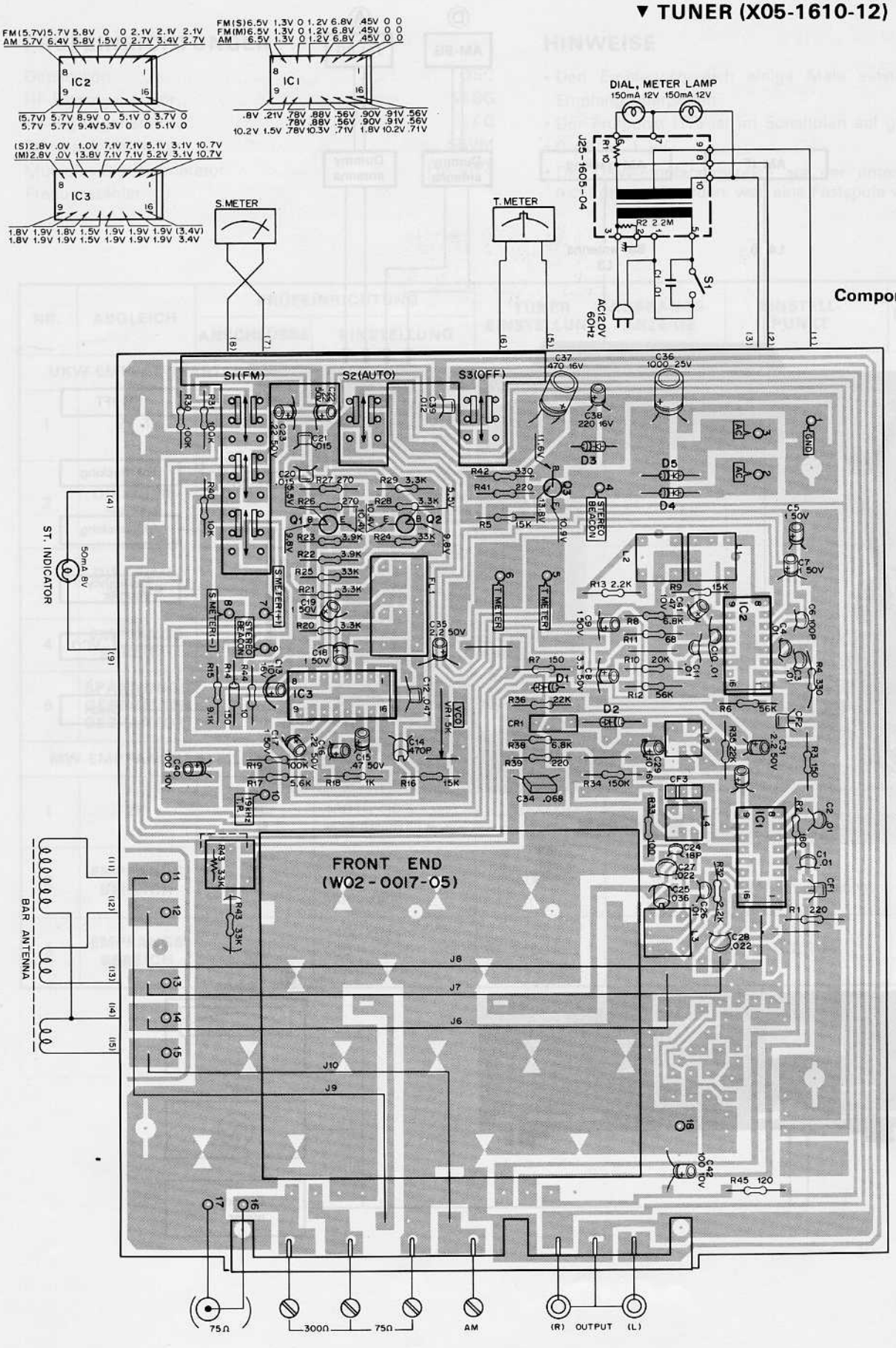
ADJUSTMENT


Ⓓ
AM-SG
Ⓐ
FM-SG
AM IF
AM tracking
Dummy antenna
Dummy antenna
L4, 5
Bar antenna L3
FM IFT
TC
TCR
TCA
FM tracking
TC2, 4
AM tracking
Frequency counter
Ⓒ
VR1
VCO
L1, 2
Discri


Ⓑ
SSVM
OSC
Distortion meter

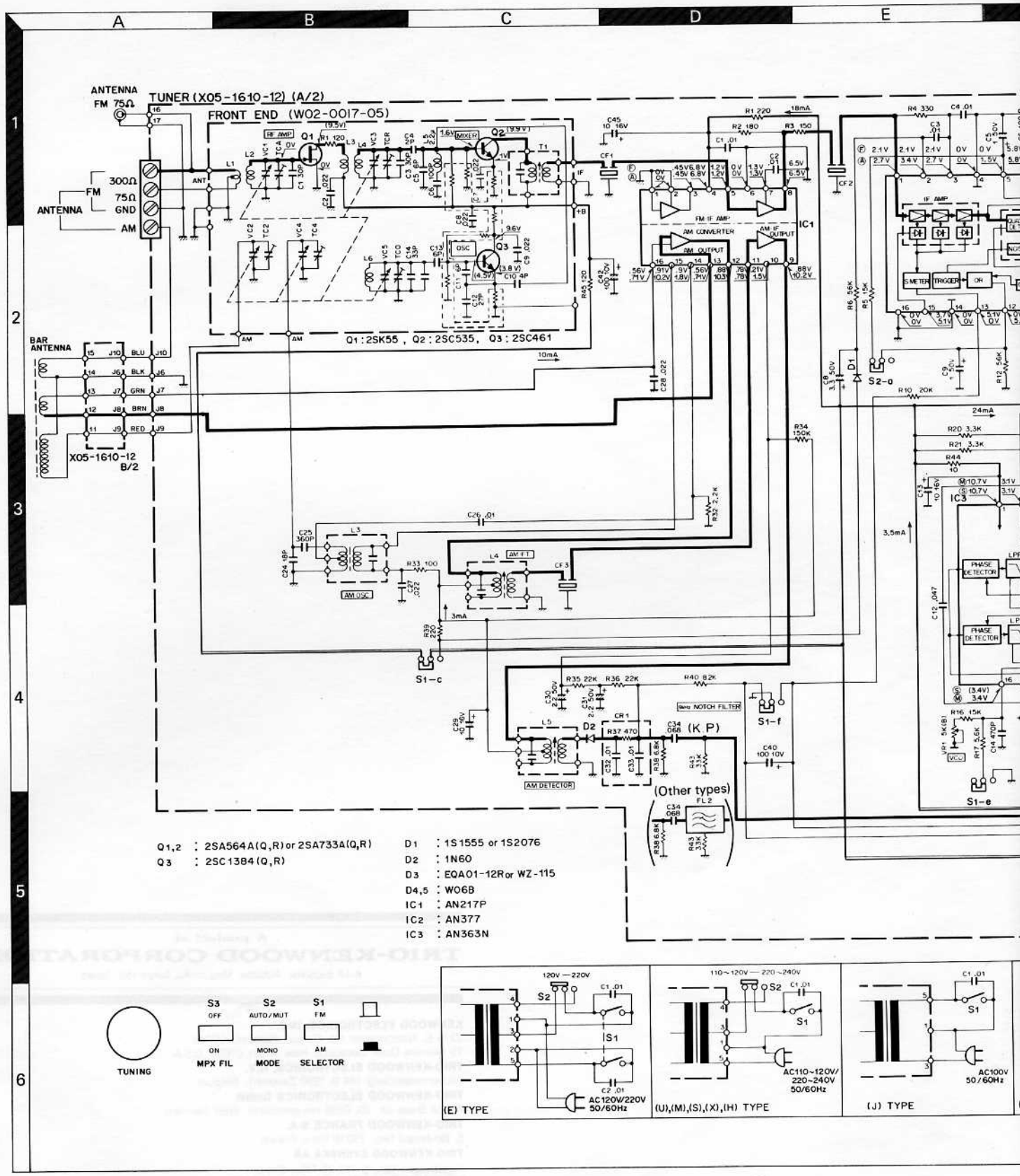
PC BOARD

▼ TUNER (X05-1610-12)



Q1,2 : 2SA564A(Q,R) or 2SA733A(Q,R)
Q3 : 2SC1384(Q,R)

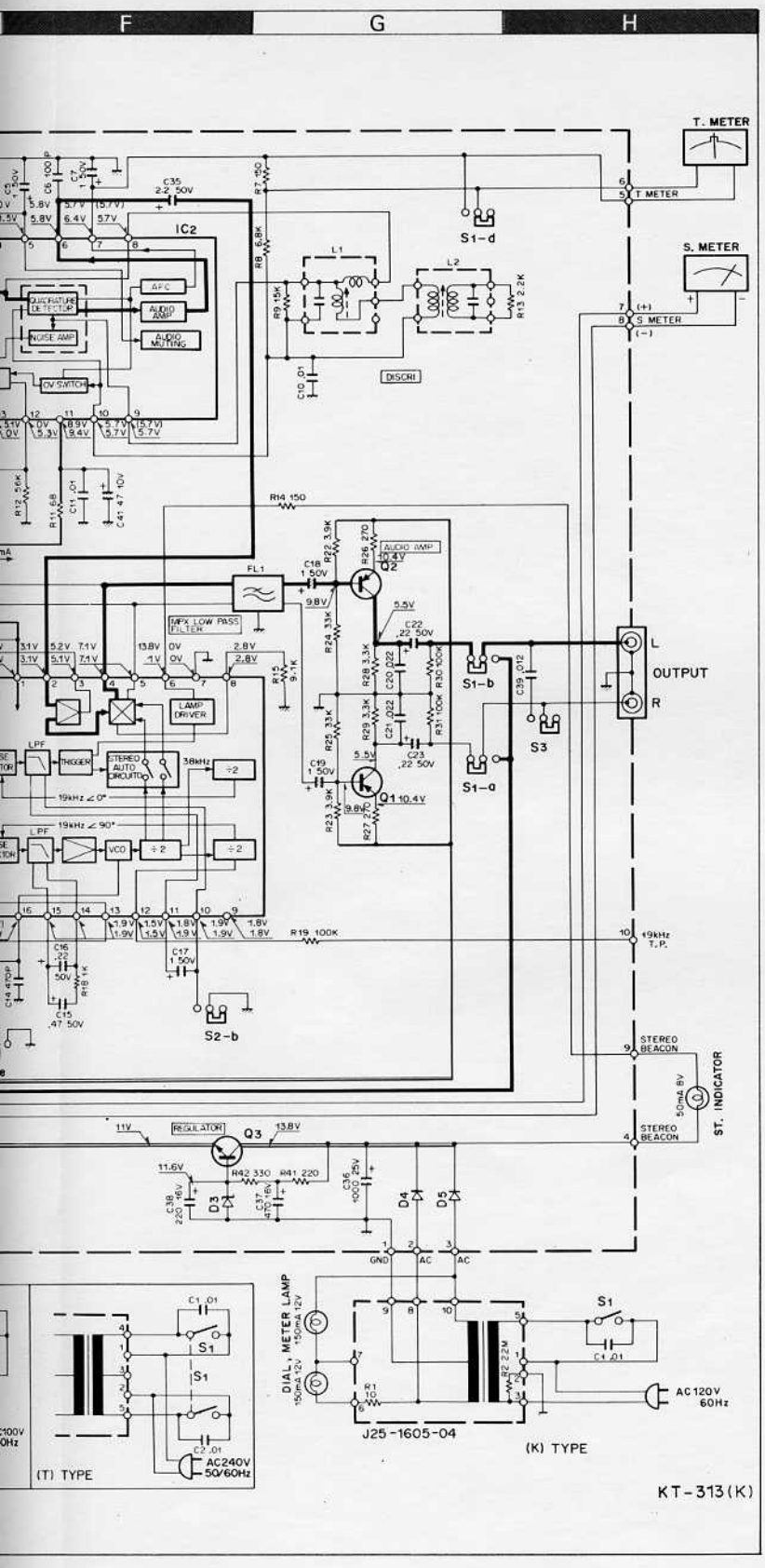
D1 : 1S1555 or 1S2076
D2 : 1N60
D3 : EQA01-12R or WZ-115
D4,5 : W06B
IC1 : AN217P
IC2 : AN377
IC3 : AN363N

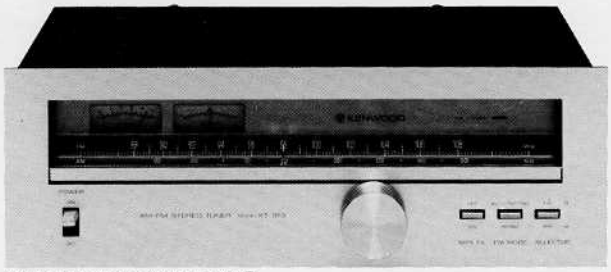


2SK55 2SC535 2SC461 2SA564A 2SA733A 2SC1384

DC voltage measured with

KT-313





SPECIFICATIONS

FM TUNER SECTION

Usable Sensitivity	10.8 dBf (1.9 μV)
50 dB Quieting Sensitivity:	
Mono	17.2 dBf (4.0 μV)
Stereo	38.3 dBf (45 μV)
Signal to Noise Ratio:	
Mono	77 dB
Stereo	72 dB
Total Harmonic Distortion:	
Mono at:	
100 Hz	0.1%
1,000 Hz	0.1%
6,000 Hz	0.2%
50 Hz to 10,000 Hz	0.2%
Stereo at:	
100 Hz	0.19%
1,000 Hz	0.15%
6,000 Hz	0.18%
50 Hz to 10,000 Hz	0.3%
Capture Ratio	1.0 dB
Alternate Channel Selectivity	60 dB
Stereo Separation:	
at 1,000 Hz	45 dB
50 Hz to 10,000 Hz	35 dB
15,000 Hz	33 dB
Frequency Response	30 Hz to 15,000 Hz, +0.2 dB, −2.0 dB
Spurious Response Ratio	85 dB
Image Response Ratio	50 dB
IF Response Ratio	90 dB
AM Suppression Ratio	65 dB
Sub-Carrier Product Ratio	57 dB
Antenna Impedance	300 ohms balanced and 75 ohms unbalanced
FM Frequency Range	88 MHz to 108 MHz
Output Level:	
at 1,000 Hz 100% Mod.	0.75V 3.3 kohms

AM TUNER SECTION

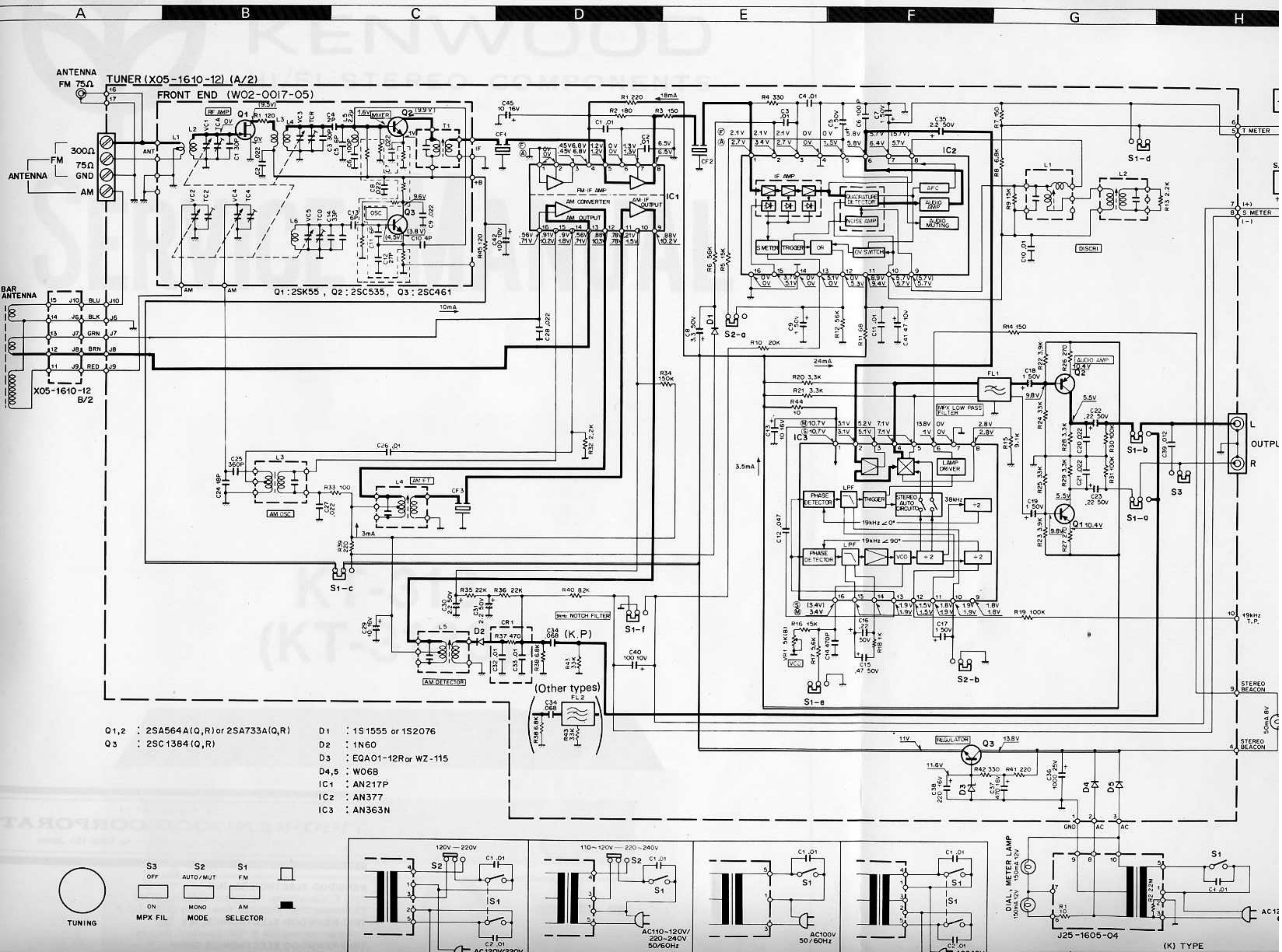
Usable Sensitivity	16 μV
Signal to Noise Ratio	50 dB
Total Harmonic Distortion	0.7%
Image Rejection	45 dB
Output Level	0.22V, 5.6 kohms

GENERAL

Power Requirements	60 Hz 120V (U.S.A. and Canada Model) or 50/60 Hz 110 ~ 120/220 ~ 240V switchable
Power Consumption	10 watts
Dimensions	W: 400 mm (15-6/8″) H: 139 mm (5-15/32″) D: 300 mm (11-26/32″)
Weight (Net)	4.3 kg (9.5 lbs)

Note: Kenwood follows a policy of continuous advancements in development. For this reason specifications may be changed

with 20 kΩ/V VOM.



A B C D E F G H
ANTENNA FM 75Ω
TUNER (X05-1610-12) (A/2)
FRONT END (W02-0017-05)
300Ω
FM 75Ω
ANTENNA GND
AM
RF AMP
MIXER
OSC
FM IF AMP
AM CONVERTER
AM OUTPUT
AM IF OUTPUT
IC1
IC2
IF AMP
QUADRATURE DETECTOR
AFC
AUDIO AMP
NOISE AMP
AUDIO MUTING
S METER
TRIGGER
OR
OV SWITCH
DISCRI
T METER
S METER
BAR ANTENNA
X05-1610-12 B/2
Q1 : 2SK55 , Q2 : 2SC535, Q3 : 2SC461
AM OSC
AM IFT
AM DETECTOR
8kHz NOTCH FILTER
(K.P)
(Other types)
IC3
PHASE DETECTOR
LPF
TRIGGER
STEREO AUTO CIRCUIT
LAMP DRIVER
VCO
19kHz ∠0°
19kHz ∠90°
38kHz
MPX LOW PASS FILTER
AUDIO AMP
OUTPUT
L
R
19kHz T.P.
STEREO BEACON
REGULATOR
Q1,2 : 2SA564A(Q,R) or 2SA733A(Q,R)
Q3 : 2SC1384(Q,R)
D1 : 1S1555 or 1S2076
D2 : 1N60
D3 : EQA01-12R or WZ-115
D4,5 : W06B
IC1 : AN217P
IC2 : AN377
IC3 : AN363N
S3 OFF ON MPX FIL
S2 AUTO/MUT MONO MODE
S1 FM AM SELECTOR
TUNING
120V — 220V
AC120V/220V
110~120V — 220~240V
AC110~120V/ 220~240V 50/60Hz
AC100V 50/60Hz
DIAL, METER LAMP
J25-1605-04
(K) TYPE

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