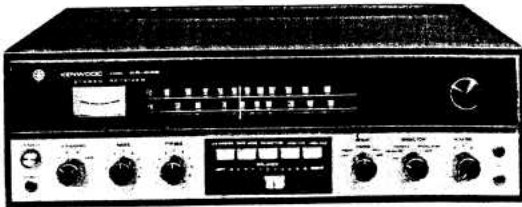


# KR-4140



### SPECIFICATIONS

#### FM TUNER SECTION

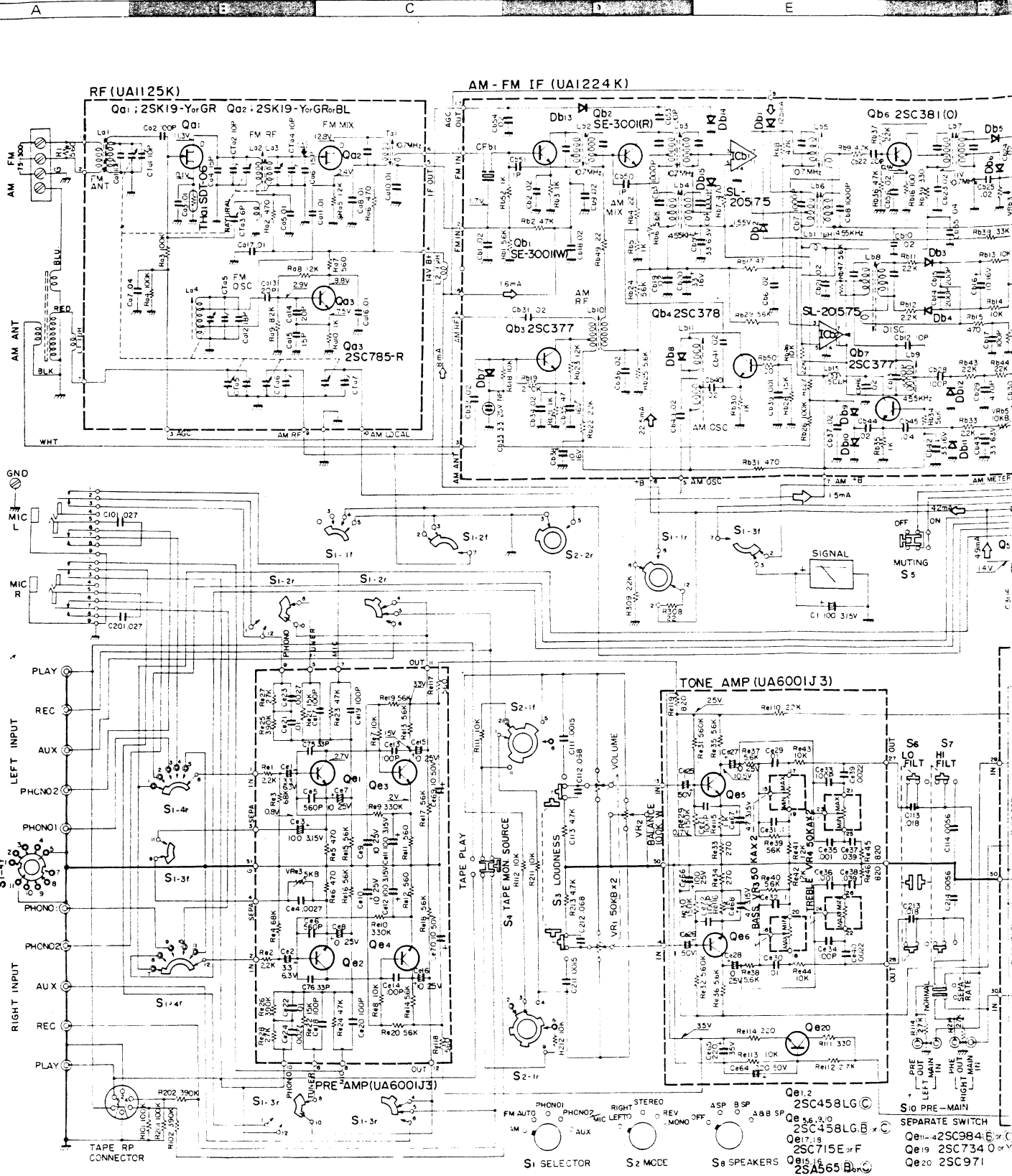
Antenna Impedance	300 ohms balanced and 75 ohms unbalanced
Usable Sensitivity, IHF	1.8 $\mu$ V
Harmonic Distortion (at 400 Hz, 100% Mod.):	
Mono	Less than 0.5%
Stereo	Less than 0.8%
Signal-to-Noise Ratio	Better than 65 dB
Capture Ratio, IHF	2.5 dB
Selectivity (Alt. Channel), IHF	Better than 55 dB
Image Rejection	Better than 70 dB
IF Rejection	Better than 100 dB
AM Suppression	Better than 50 dB
Stereo Separation	Better than 35 dB at 1,000 Hz Better than 25 dB at 10,000 Hz
Sub Carrier Suppression	Better than 40 dB
Muting Level	10 $\mu$ V
Switching Level	10 $\mu$ V
Front-end	2 FETs, 4-gang tuning condenser
IF Stage	2 ICs, mechanical filter

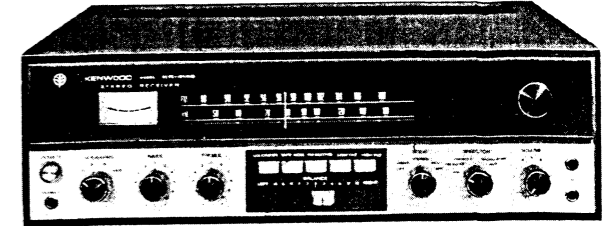
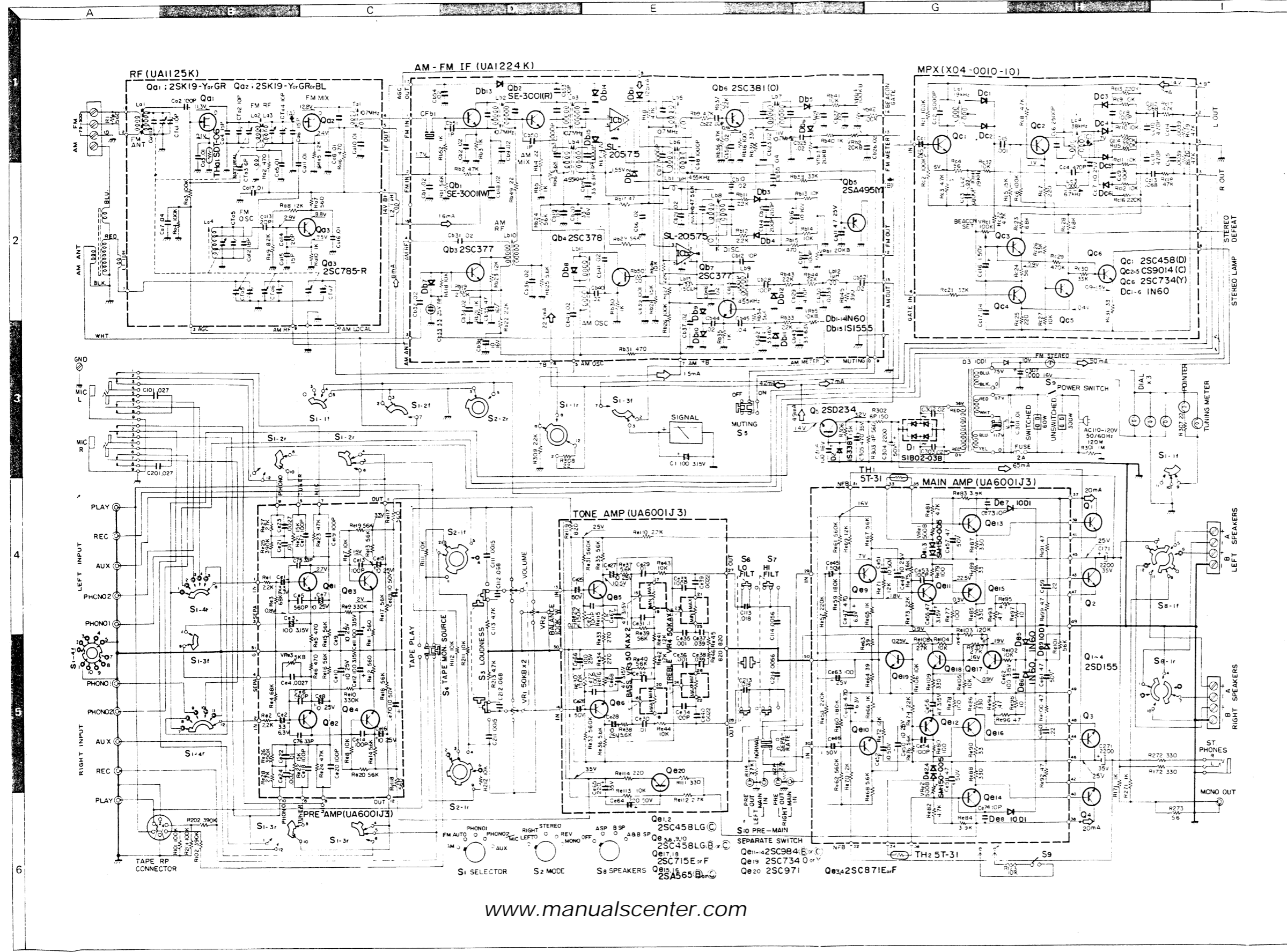
#### AM TUNER SECTION

Antenna	Built-in ferrite bar antenna External antenna terminals
Usable Sensitivity, IHF	15 $\mu$ V
Selectivity, IHF	Better than 25 dB
Image Rejection	Better than 70 dB
IF Rejection	Better than 70 dB
Front-end	3-Gang

#### AMPLIFIER SECTION

Power Output	95 watts $\pm$ 1 dB both channels at 4 ohms 67 watts $\pm$ 1 dB both channels at 8 ohms 80 watts both channels at 4 ohms 58 watts both channels at 8 ohms
Dynamic Power Output IHF	
Continuous Power Output:	
Each channel driven	33/33 watts at 4 ohms 24/24 watts at 8 ohms
Both channels driven	21/21 watts at 4 ohms 18/18 watts at 8 ohms
Mono output	1V at rated output
Harmonic Distortion	Less than 0.8% at rated output Less than 0.1% at -3 dB rated output Less than 0.5% at rated output Less than 0.2% at -3 dB rated output
Intermodulation Distortion	
Frequency Response:	
Main input	15 Hz to 50,000 Hz $\pm$ 1.5 dB
High level (AUX) input	20 Hz to 40,000 Hz $\pm$ 1.5 dB
Power Bandwidth, IHF	18 Hz to 30,000 Hz
Input Sensitivity, (for rated output):	
Phono 1	2.5 mV 50k ohms
Phono 2	2.5 mV 50k ohms
Mic	1.8 mV 100k ohms
AUX/Tape play	150 mV 100k ohms
Main input	100 mV 100k ohms
Recording Output (below rated input):	
Pin Jack	150 mV
DIN Connector	30 mV
Hum and Noise (below rated output):	
Phono 1	65 dB
Phono 2	65 dB
MIC	58 dB
AUX/Tape play	75 dB
Damping Factor	50 at 8 ohms
Speaker Impedance	Accepts 4 to 16 ohms
Bass Control	$\pm$ 10 dB at 100 Hz
Treble Control	$\pm$ 10 dB at 10,000 Hz
Low Filter	-7 dB at 100 Hz
High Filter	-10 dB at 10,000 Hz
Loudness Control (at -30 dB):	+10 dB at 100 Hz, +5 dB at 10,000 Hz
<b>GENERAL</b>	
Switches:	
Speakers	OFF, A, B, A and B
Selector	AM, FM Auto, Phono 1, Phono 2/MIC, AUX
Mode	Left, Right, Stereo, REV, MIX
Others	Tape Monitor, Low and High Filter, FM Muting, Loudness
AC, Outlets	1 switched and 1 unswitched
Semiconductors	2 ICs, 2 FETs, 36 Transistors, 33 Diodes
Power Voltage	110/120V ~ 220/240V AC, 50/60 Hz
Power Consumption	120 watts at full power 20 watts at no signal
Dimensions	16-3/4"(W), 5-1/2"(H), 12-3/8"(D)
Weight	19.8 lbs





### SPECIFICATIONS

FM TUNER SECTION	
Antenna Impedance	300 ohms balanced and 75 ohms unbalanced
Usable Sensitivity, IHF	1.8 μV
Harmonic Distortion (at 400 Hz, 100% Mod.)	Less than 0.5%
Mono	Less than 0.8%
Stereo	Better than 65 dB
Signal-to-Noise Ratio	2.5 dB
Capture Ratio, IHF	Better than 70 dB
Selectivity (Alt. Channel), IHF	Better than 55 dB
Image Rejection	Better than 100 dB
IF Rejection	Better than 35 dB
AM Suppression	Better than 25 dB at 1,000 Hz
Stereo Separation	Better than 40 dB
Sub Carrier Suppression	10 μV
Muting Level	10 μV
Switching Level	2 FETs, 4-gang tuning condenser
Front-end	2 ICs, mechanical filter
IF Stage	
AM TUNER SECTION	
Antenna	Built-in ferrite bar antenna External antenna terminals
Usable Sensitivity, IHF	15 μV
Selectivity, IHF	Better than 25 dB
Image Rejection	Better than 70 dB
IF Rejection	Better than 70 dB
Front-end	3-Gang
AMPLIFIER SECTION	
Power Output	95 watts ± 1 dB both channels at 4 ohms 67 watts ± 1 dB both channels at 8 ohms 80 watts both channels at 4 ohms 58 watts both channels at 8 ohms
Dynamic Power Output IHF	
Continuous Power Output:	
Each channel driven	33/33 watts at 4 ohms 24/24 watts at 8 ohms
Both channels driven	21/21 watts at 4 ohms 18/18 watts at 8 ohms
Mono output	1V at rated output
Harmonic Distortion	Less than 0.8% at rated output Less than 0.1% at -3 dB rated output
Intermodulation Distortion	Less than 0.5% at rated output Less than 0.2% at -3 dB rated output
Frequency Response:	
Main Input	15 Hz to 50,000 Hz ± 1.5 dB
High level (AUX) input	20 Hz to 40,000 Hz ± 1.5 dB
Power Bandwidth, IHF	18 Hz to 30,000 Hz
Input Sensitivity, (for rated output):	
Phono 1	2.5 mV 50k ohms
Phono 2	2.5 mV 50k ohms
Mic	1.8 mV 100k ohms
AUX/Tape play	150 mV 100k ohms
Recording Output (below rated input):	
Pin Jack	150 mV
DIN Connector	30 mV
Hum and Noise (below rated output):	
Phono 1	65 dB
Phono 2	65 dB
MIC	58 dB
AUX/Tape play	75 dB
Damping Factor	50 at 8 ohms
Speaker Impedance	Accepts 4 to 16 ohms
Bass Control	±10 dB at 100 Hz
Treble Control	±10 dB at 10,000 Hz
Low Filter	-7 dB at 100 Hz
High Filter	-10 dB at 10,000 Hz
Loudness Control (at -30 dB):	+10 dB at 100 Hz, +5 dB at 10,000 Hz
GENERAL	
Switches:	OFF, A, B, A and B
Speakers	Left, Right, Stereo, REV. MIX
Selector	Tape Monitor, Low and High Filter, FM Muting, Loudness
Mode	
Others	
AC Outlets	1 switched and 1 unswitched
Semiconductors	2 ICs, 2 FETs, 38 Transistors, 3 Diodes
Power Voltage	110/120V ~ 220/240V AC, 50/60 Hz
Power Consumption	20 watts at full power 20 watts at no signal
Dimensions	16-3/4"(W), 5-1/2"(H), 12-3/8"(D)
Weight	19.8 lbs

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**Ex. 1. One PCB ass'y**

Refer to the KR-5340's schematic diagram. (X05-1080-13)

NO.	ALIGN	TEST EQUIPMENTS		RECEIVER SETTING	OUTPUT INDICATOR	ADJUSTMENT POINTS	REMARKS
		CONNECTION	SETTING				
<b>FM SECTION</b>							
1	IF	Ⓐ and Ⓑ	95 MHz (60 dB) 1 kHz (Mod) 75 kHz (Dev)	95 MHz	SSVM & scope to REC jack	Tg4. 5. 8	Maximum deflection
2		—	—	—	T meter	Tg9 (primary)	Make the pointer position in the center of the meter
3		Ⓐ and Ⓑ	95 MHz (60 dB) 1 kHz (Mod) 75 kHz (Dev)	95 MHz	SSVM, scope & distortion meter to REC jack (L)	Tg9 (secondary)	Maximum deflection and minimum distortion
4	OUTPUT	ditto	95 MHz 1 kHz (Mod) 75 kHz (Dev) 60 dB (Input)	95 MHz	ditto	VRg3	Output voltage is 1V*
5	TRACKING	ditto	90 MHz 1 kHz (Mod) 75 kHz (Dev)	90 MHz	ditto	Tg1. 2. 3	Maximum deflection
6			108 MHz 1 kHz (Mod) 75 kHz (Dev)	108 MHz		CTg1~3	
7	SCA	AG to TP1	67 kHz	Non-station	SSVM & scope to TP2	Tg12	Minimum deflection
8	19 kHz 38 kHz	Ⓑ and Ⓒ	98 MHz 1 kHz (Mod) 68.25 kHz (Dev) Phase : Reverse 60 dB (Input)	95 MHz	SSVM & scope to REC jack (L)	Tg13. 14. 15	Maximum deflection
9	SEPARATION	ditto	95 MHz 67.5 kHz (Dev.) 1 kHz (Mod.) 60 dB (Input) L or R (SELECTOR)	95 MHz	ditto	VRg4	Minimum deflection
10	BEACON	ditto	95 MHz 40 kHz (Dev.) 1 kHz (Mod.) 60 dB (Input)	95 MHz	Stereo Indicator	VRg5	Indicator lights
11	DISTORTION	ditto	95 MHz 1 kHz (Mod) 68.25 kHz (Dev) L (Select) 60 dB (Input)	95 MHz	SSVM, scope & distortion meter to REC jack (L)	Tg4. 5. 8	Minimum distortion
<b>AM SECTION</b>							
1	IF	Ⓑ and Ⓓ	1000 kHz 400 Hz, 30% (Mod) 100 dB	1000 kHz	SSVM & scope to REC jack (L)	Tg10. 6. 7	Maximum deflection
2	TRACKING	ditto	600 kHz 400 Hz, 30% (Mod) 100 dB	600 kHz	ditto	Tg11 Bar antenna	ditto
3			1400 kHz 400 Hz, 30% (Mod)	1400 kHz		CTg4. 5	
4	S METER	ditto	1000 kHz (400 Hz, 30% Mod.)	1000 kHz	S meter	VRg1	The meter deflection at 4.5

\* Some products don't have the output-level adjusting potentiometer.

# TUNER ADJUSTMENT

## Ex. 2. more 2 pieces of PCB ass'y

Refer to KT-8005's schematic diagram. (X01-1120-10, X02-1040-10 and X04-1000-11).

NO.	ALIGN	TEST EQUIPMENTS		TUNER SETTING	OUTPUT INDICATOR	ADJUSTMENT POINTS	REMARKS
		CONNECTION	SETTING				
<b>FM SECTION</b>							
1	IF	Ⓐ and Ⓑ	95 MHz (60 dB) 1 kHz (Mod) 75 kHz (Dev)	95 MHz	SSVM & scope to REC jack	La7, Lb5	Maximum deflection
2		—	—	—	T meter	Lb11	Make the pointer position in the center of meter
3		Ⓐ and Ⓑ	95 MHz (60 dB) 1 kHz (Mod) 75 kHz (Dev.)	95 MHz	SSVM, scope & distortion meter	Lb7	Maximum deflection and minimum distortion
4	TRACKING	ditto	90 MHz 75 kHz (Dev.) 1 kHz (Mod.)	90 MHz	ditto	La1, La3, La4 La6, La8	Maximum deflection
5			108 MHz 75 kHz (Dev.) 1 kHz (Mod.)	108 MHz		CTa1 ~ 5	ditto
6	BEACON	ditto	95 MHz 75 kHz (Dev.) 1 kHz (Mod.) 60 dB (Input)	95 MHz	DC Volt Meter to TP4	VRb4	Set VRb4 to its center. Check the output (DC) at TP1 and assume its value for 0 dB
7	IF GAIN	ditto	95 MHz 75 kHz (Dev.) 1 kHz (Mod.) 22 ~ 23 dB (Input)	ditto	ditto	VRb1	Adjust VRb1 so that the output is at -3 dB in respect to 0 dB
8	MUTING	ditto	ditto	95 MHz MUTING 1 position	ditto	VRb4	Adjust VRb4 so that muting operation is on
9	AF OUTPUT*	ditto	95 MHz 75 kHz (Dev.) 1 kHz (Mod.) 60 dB (Input)	95 MHz	SSVM & Scope to REC jack	VRb2	Output is 1.5V
10	S METER	ditto	ditto	ditto	S meter	Lb18	Maximum deflection
11						VRb3	Confirm the meter deflection at 4.5
12	SCA	AG to TP2	67 kHz	Non-station	SSVM & scope to TP3	Lc6	Minimum deflection
13	19 kHz 38 kHz	Ⓑ and Ⓒ	98 MHz 1 kHz (Mod.) 68.25 kHz (Dev.) Phase: Reverse 60 dB (Input)	95 MHz	SSVM & scope to REC jack (L)	Lc1 ~ 5	Maximum deflection
14	SEPARATION	ditto	95 MHz 67.5 kHz (Dev.) 1 kHz (Mod.) 60 dB (Input) L or R (SELECTOR)	95 MHz	ditto	VRc1	Minimum deflection
15	DISTORTION	ditto	95 MHz 1 kHz (Mod.) 68.25 kHz (Dev.) L (Select) 60 dB (Input)	95 MHz	SSVM, scope & distortion meter to REC jack (L)	La7, Lb5	Minimum distortion
16	MULTIPATH	AG to TP4	38 kHz (1 mV)	Non-station	SSVM & Scope to TP5	Lb12, Lb13	Maximum deflection
17		—	—		—	VRb5	Set VRb5 to its center

When adjusting AM circuit, refer to AM SECTION in EX.1.

\* Each model has its own value, refer to the service manual.