KENWOOD

SOLID STATE AM-FM STEREO TUNER

KT-6005

SPECIFICATIONS

FM SECTION

Antenna Impedance	300 ohms balanced & 75 ohms unbalanced
Usable Sensitivity, IHF	1.5 μV
Quieting Slope	55 dB at 3 μV 65 dB at 10 μV 70 dB at 50 μV
Frequency Response	20 Hz to 15,000 Hz (+0.2 dB, −1.0 dB)
Harmonic Distortion (100 % modulation with 400 Hz)	Mono Less than 0.3 % Stereo Less than 0.5 %
Signal to Noise Ratio	Better than 70 dB
Capture Ratio, IHF	1.3 dB
Image Rejection	Better than 90 dB
Selectivity, IHF (Alt. channel)	Better than 80 dB
IF Rejection	Better than 100 dB
Spurious Signal Rejection	Better than 100 dB
AM Suppression	Better than 60 dB
Stereo Separation	Better than 45 dB at 400 Hz Better than 38 dB at 100 Hz to 8,000 Hz
Sub Carrier Suppression	Better than 65 dB
Output Voltage	1.5 Volt at 100 % modulation with 400 Hz
Output Impedance	10.5 k-ohms

AM SECTION

Antenna	Built-in ferrite antenna External antenna terminal
Usable Sensitivity, IHF	13 μV (Ext. antenna terminal) 300 μV/m (Ferrite antenna)
Selectivity, IHF	Better than 35 dB
Image Rejection	Better than 70 dB
IF Rejection	Better than 70 dB
Signal to Noise Ratio	Better than 50 dB at 1 mV input
Output Voltage	0.15 Volts at 30 % modulation with 400 Hz.

GENERAL

Switches	**SELECTOR**	AM, FM AUTO, FM MONO
	OTHERS	Inter Station muting Stereo noise Filter Power, Tuning
Power Consumption		20 Watts
Dimensions		17-1/8" W, 6-1/32" H, 11-13/16" D (435 W, 153 H, 300 D mm)
Weight		19.5 lbs. (8.9 kg)

TUNER ADJUSTMENT

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Tuner PC boards used in receivers and tuners are roughly categorized into two types except special types:

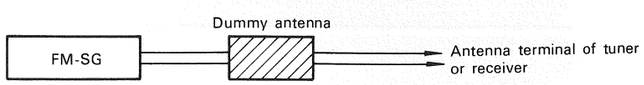
1. one piece board ass'y.
2. more than 2 pieces of pcb ass'y.

The adjusting procedures described herein are only for typical models. In some models, adjusting spots may be fixed without requiring further adjustment. For special types, refer to the service manual.

INSTRUMENTS USED

Oscilloscope ..... OSC
AM signal generator ..... AM-SG
FM signal generator ..... AM-SG
Audio generator ..... AG
Solid state voltmeter ..... SSVM
FM multiplex generator ..... FM-MPX
Frequency counter
DC VTVM (VOM)
Distortion Meter

INSTRUMENTS CONNECTION

Ⓐ


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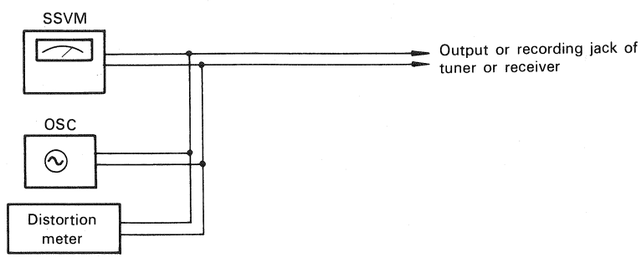

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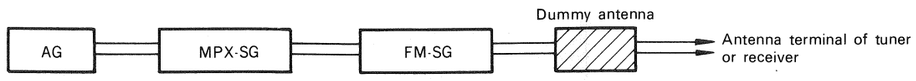

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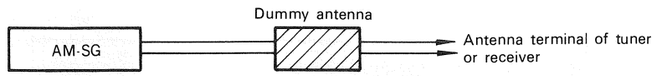
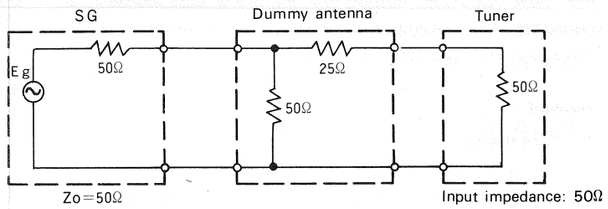


NOTE:

* RF-SG is set to the lowest response possible on oscilloscope.
* The output level RF-SG is made a loss by the dummy antenna. The loss is different from the dummy antenna, so you should take into consideration the value of the loss applicable to your case. (Refer to the right of this page.)
  - Loss in the SG-dummy antenna connection.
    OPEN and LOAD scales are provided for SG.
    1. OPEN scale:
       Indicates an output when an infinite impedance is connected to the SG output terminals.
    2. LOAD scale:
       Indicates an output when a load of the internal impedance Zo is connected to the SG output terminals.
* Repeat TRACKING adjustment several times and confirm the reception of broadcasting.
* Test point is shown in the schematic diagram.
* Adjust the SCA Filter Coil if necessary.

NOTE) Amount of attenuation due to the pad.

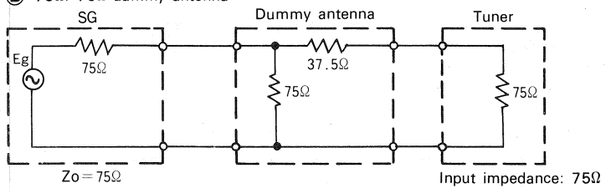
Ⓐ 50Ω: 50Ω dummy antenna



① When using SG having OPEN type dial.
Input level at antenna of tuner is −12 dB of dial readings.
② When using SG having LOAD type dial.
Input level at antenna of tuner is −6 dB of dial readings.

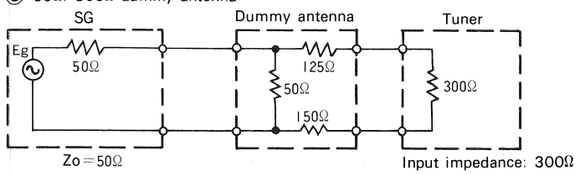
Note) When adjusting AM tuner, connect test equipments as this.

Ⓑ 75Ω: 75Ω dummy antenna



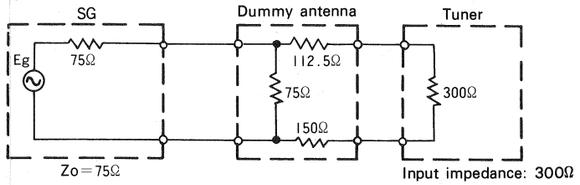
① When using SG having OPEN type dial.
Input level at antenna of tuner is −12 dB of dial readings.
② When using SG having LOAD type dial.
Input level at antenna of tuner is −6 dB of dial readings.

Ⓒ 50Ω: 300Ω dummy antenna



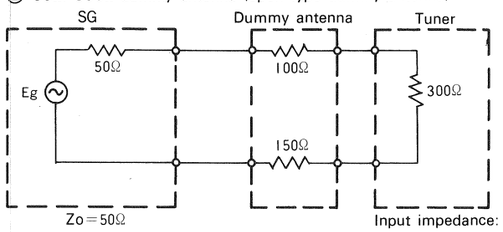
① When using SG having OPEN type dial.
Input level at antenna of tuner is −12 dB of dial readings.
② When using SG having LOAD type dial.
Input level at antenna of tuner is −6 dB of dial readings.

Ⓓ 75Ω: 300Ω dummy antenna



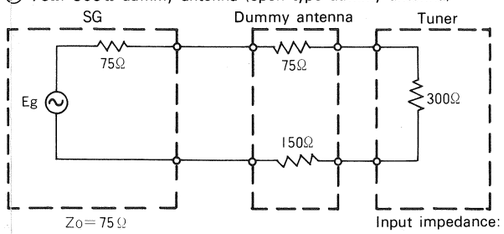
① When using SG having OPEN type dial.
Input level at antenna of tuner is −12 dB of dial readings.
② When using SG having LOAD type dial.
Input level at antenna of tuner is −6 dB of dial readings.

Ⓔ 50Ω: 300Ω dummy antenna (open type dummy antenna)



① When using SG having OPEN type dial.
Input level at antenna of tuner is −6 dB of dial readings.
② When using SG having LOAD type dial.
Input level at antenna of tuner agrees with dial readings of SG.

Ⓕ 75Ω: 300Ω dummy antenna (open type dummy antenna)



① When using SG having OPEN type dial.
Input level at antenna of tuner is −6 dB of dial readings.
② When using SG having LOAD type dial.
Input level at antenna of tuner agrees with dial readings of SG.

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				
FM SECTION							
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 distorstion
AM SECTION							
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.

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				
FM SECTION							
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) 1kHz (Mod) 75 kHz (Dev.)	95 MHz	SSVM, scope & distortion meter	Lb7	Maximum deflection and minimum dis tortion
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.