

KENWOOD

FM/AM TUNER

KT-593

FM/MW/SW TUNER

KT-593S

INSTRUCTION MANUAL

KENWOOD CORPORATION

B60-1113-00 (JA) (SI) (K, P, M, X, Y) (AP)  
95/12 11 10 9 8

# Introduction

Your choice of this product indicates that you are a devotee to excellence in sound reproduction.

We appreciate your patronage and take pride in the long tradition of quality components that our company represents.

So that you can get the most out of your unit, we suggest that you take the time to read through this manual before you hook up and operate your system. This will acquaint you with operating features and system-connection considerations so that your listening pleasure will be enhanced right from the start. You will notice that in all aspects of planning, engineering, styling, operating convenience and adaptability we have sought to anticipate your needs and desires.

**Keep this manual handy for future reference.**

## For your records

Record the serial number, found on the back of the unit, in the spaces designated on the warranty card, and in the space provided below. Refer to the model and serial numbers whenever you call upon your dealer for information or service on this product.

Model \_\_\_\_\_ Serial Number \_\_\_\_\_

## Unpacking

Unpack the unit carefully and make sure that all accessories are put aside so they will not be lost.

Examine the unit for any possibility of shipping damage. If your unit is damaged or fails to operate, notify your dealer immediately. If your unit was shipped to you directly, notify the shipping company without delay. Only the consignee (the person or company receiving the unit) can file a claim against the carrier for shipping damage.

We recommend that you retain the original carton and packing materials for use should you transport or ship the unit in the future.

## For the U.S.A.

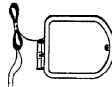
### Note to CATV system installer:

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

## Accessories

AM loop antenna ..... 1  
(The shape of the loop antenna provided may differ depending on the area.)

FM indoor antenna ..... 1



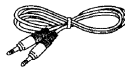
AC plug adaptor ..... 1  
(Except for some areas)  
For the unit with a European AC plug in areas other than Europe.

Loop antenna stand ..... 1







Audio cord ..... 1

System control cord ..... 1



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# Before applying power

 **Caution:** Read this page carefully to ensure safe operation.

## For the U.S.A. and Canada

### Important!

Units shipped to the U.S.A. and Canada are designed for operation on 120 volts AC only.

**CAUTION:** TO PREVENT ELECTRIC SHOCK DO NOT USE THE AC PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

## For Australia and Europe

### Important!

Units shipped to Australia are designed for operation on 240 V AC only.

Units shipped to Europe are designed for operation on 230 V AC only.

## For the United Kingdom

### Important!

Units shipped to the U.K. are designed for operation on 240 volts AC only.

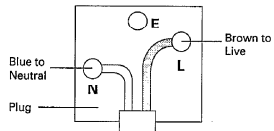
The mains plug must be removed from the wall socket prior to any internal examination.

The wires in this mains lead are coloured in accordance with the following code:

Blue ..... Neutral  
Brown ..... Live

The wires in this mains lead must be connected to the terminals in the plug as follows:

Wire colour	Plug terminal marking
Blue	N or Black
Brown	L or Red



#### Notes:

1. If a 13-amp plug is used, this must be fitted with a 13-amp fuse.
2. If a 3-pin plug with earthing contact is used, no wire must be connected to the E terminal.

## For other countries

### Important!

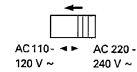
Units shipped to countries other than the above countries are equipped with an AC voltage selector switch on the rear panel. Refer to the following paragraph for the proper setting of this switch.

### AC voltage selection

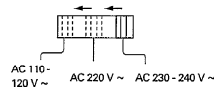
This unit operates on 110-120 or 220-240 volts AC. The AC voltage selector switch Type A or Type B on the rear panel is set to the voltage that prevails in the area to which the unit is shipped. Before connecting the power cord to your AC outlet, make sure that the setting position of this switch matches your line voltage. If not, it must be set to your voltage in accordance with the following direction.

#### AC voltage selector switch

##### Type A



##### Type B






Move switch lever to match your line voltage with a small screwdriver or other pointed tool.

#### Note:

Our warranty does not cover damage caused by excessive line voltage due to improper setting of the AC voltage selector switch.

## Safety precautions

**WARNING:** TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

	<p><b>CAUTION</b> RISK OF ELECTRIC SHOCK DO NOT OPEN</p>	<p>CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE, REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.</p>
	<p>THE LIGHTNING FLASH WITH ARROWHEAD SYMBOL, WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE USER TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK TO PERSONS.</p>	
	<p>THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE APPLIANCE.</p>	

## IMPORTANT SAFEGUARDS

⚠ Caution: Read this page carefully to ensure safe operation.

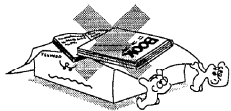
Please read all of the safety and operating instructions before operating this unit. For best results, follow all warnings placed on the unit and adhere to the operating and use instructions. These safety and operating instructions should be retained for future reference.

- 1. Power sources** – The unit should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
- 2. Power-cord protection** – Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the unit.

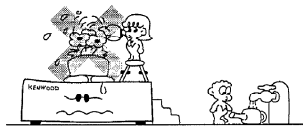
Never pull or stretch the cord.



- 3. Grounding or polarization** – The precautions should be taken so that the grounding or polarization means of this unit is not defeated.
- 4. Ventilation** – The unit should be situated so that its location or position does not interfere with its proper ventilation. To maintain good ventilation, do not put records or a table-cloth on the unit. Place the unit at least 10 cm away from the walls. Do not use the unit on a bed, sofa, rug or similar surface that may block the ventilation openings.



- 5. Water and moisture** – The unit should not be used near water - for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

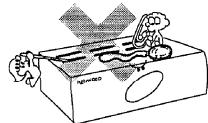


- 6. Temperature** – The unit may not function properly if used at extremely low, or freezing temperatures. The ideal ambient temperature is above +5°C (41°F).

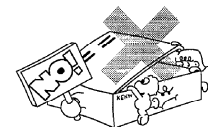
- 7. Heat** – The unit should be situated away from heat sources such as radiators, heat registers, stoves, or other units (including amplifiers) that produce heat.



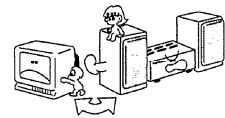
- 8. Electric shock** – Care should be taken so that objects do not fall and liquid is not spilled into the enclosure through openings. If a metal object, such as a hair pin or a needle, comes into contact with the inside of this unit, a dangerous electric shock may result. For families with children, never permit children to put anything, especially metal, inside this unit.



- 9. Enclosure removal** – Never remove the enclosure. If the internal parts are touched accidentally, a serious electric shock might occur.



- 10. Magnetic fields** – Keep the unit away from sources of magnetic fields such as TV sets, speaker systems, radios, motorized toys or magnetized objects.



- 11. Cleaning** – Do not use volatile solvents such as alcohol, paint thinner, gasoline, or benzene, etc. to clean the cabinet. Use a clean dry cloth.



## Introduction

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### For the U.S.A.

#### Note to CATV system installer:

This reminder is provided to call the CATV system installer's

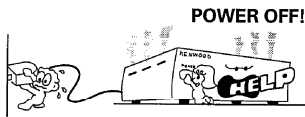
**Caution :** Read this page carefully to ensure safe operation.

**12. Carts and stands** – An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.



**13. Nonuse periods** – The power cord of the unit should be unplugged from the outlet when left unused for a long period of time.

**14. Abnormal smell** – If an abnormal smell or smoke is detected, immediately turn the power OFF and pull out the power cord. Contact your dealer or nearest service center.

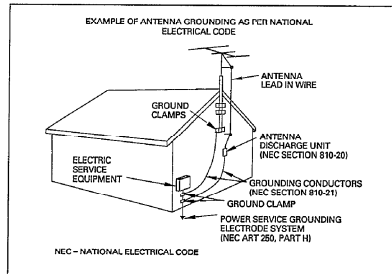


**15. Damage requiring service** – The unit should be serviced by qualified service personnel when:

- A. The power-supply cord or the plug has been damaged; or
- B. Objects have fallen, or liquid has been spilled into the unit; or
- C. The unit has been exposed to rain; or
- D. The unit does not appear to operate normally or exhibits a marked change in performance; or
- E. The unit has been dropped, or the enclosure damaged.

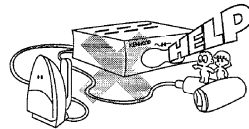
**16. Servicing** – The user should not attempt to service the unit beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

**17. Outdoor antenna grounding** – If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges. Section 810 of the National Electrical Code, ANSI/NFPA 70, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure.



**18. Power lines** – An outdoor antenna should be located away from power lines.

**19. AC outlets** – Do not connect other audio equipment with a power consumption larger than that specified to the AC outlet on the rear panel. Never connect other electrical units, such as an iron or toaster, to it to prevent fire or electric shock.



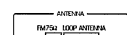
**Notes:**

- 1. Item 3 is not required except for grounded or polarized equipment.
- 2. Item 17 and 18 are not required except for units provided with antenna terminals.
- 3. Item 17 complies with UL in the U.S.A.

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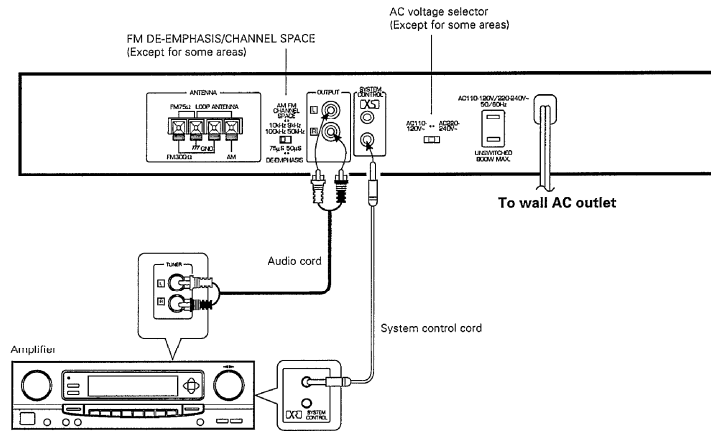
Connection method to each antenna terminal

- ① Push lever.
- ② Insert cord.
- ③ Return lever.



# System connections

Make connections as shown below. When connecting the related system components, refer also to the instruction manuals of the related components.  
Do not plug in the power lead until all connections are completed.



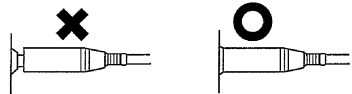
### AC outlets on the rear panel

#### System control connection

When connected to an amplifier having KENWOOD SYSTEM CONTROL terminals, system operation such as remote control is made possible. For details, refer to the instruction manual of the amplifier or receiver.

If your amplifier or receiver is not equipped with the SYSTEM CONTROL terminals, do not connect anything to any SYSTEM CONTROL terminal.

Do not connect the unit in any system configuration other than specified.



- Be sure to insert the system control cord plugs fully into the SYSTEM CONTROL terminals.
- If the system control cord and audio cords are not connected properly, the automatic system governing remote control and system functions will not operate.

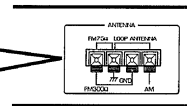
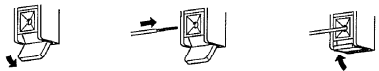
Unit destination	Shape of the AC outlet
For U.S.A., Canada and U.S. military	
For Australia	
For other countries	

#### Notes:

1. Connect all cords firmly. If connections are loose, there could be loss of sound or noise produced.
2. When plugging and unplugging connection cords, be sure to first remove the power cord from the AC outlet. Plugging/unplugging connection cords without removal of the power cord can cause malfunctions or damage to the unit.
3. Do not connect up a power source which is larger than that indicated on the socket at the rear of the unit.

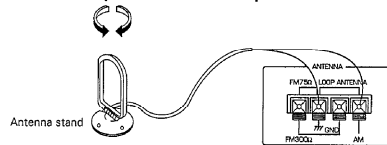
### Connection method to each antenna terminal

- ① Push lever.
- ② Insert cord.
- ③ Return lever.



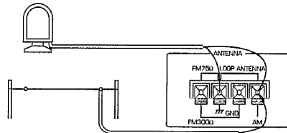
### ■ AM loop antenna connection

The supplied antenna is for indoor use. Place it as far as possible from the main system, TV set, speaker cords and power cord, and set it to a direction which provides the best reception.



### ■ AM outdoor antenna connection

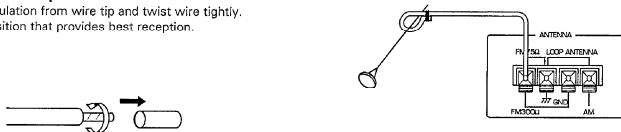
If the reception is poor when the AM loop antenna is used, distribute a vinyl-coated wire of more than 6 meters outdoors, without disconnecting the loop antenna.



### ■ FM indoor antenna connection

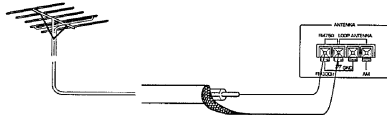
The supplied antenna is for indoor use. For stable reception, remove the indoor antenna after installing an outdoor antenna as soon as possible.

- ① Remove insulation from wire tip and twist wire tightly.
- ② Find the position that provides best reception.
- ③ Fix the end.



### ■ FM outdoor antenna connection

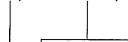
It is recommended to install an exclusive FM outdoor antenna to capture FM broadcast with high sound quality. Use a coaxial cable for the connection between the outdoor antenna and FM ANTENNA terminal on the rear panel. For the connection between the coaxial cable and FM ANTENNA terminal, please refer to the illustration.



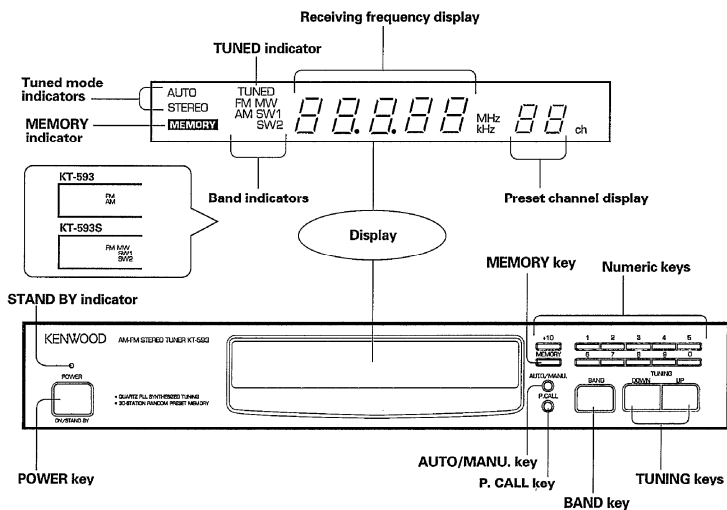
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## Reception of radio broadcast

MEMORY key      Numeric keys

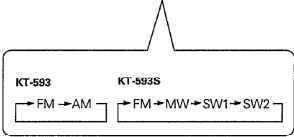


# Controls and indicators



**STAND BY mode of POWER switch**

When the power cord of this system is plugged into an AC outlet, the STAND BY indicator lights up regardless of the ON/OFF setting of the POWER switch. This indicates that a small amount of current is being supplied to the unit to back up the memory contents. This mode is referred to as the Stand By mode.



**FM DE-EMPHASIS/CHANNEL SPACE switch (Except for some areas)**

The FM DE-EMPHASIS/CHANNEL SPACE switch on the rear panel is set to the correct setting that prevails in the area to which the unit is shipped. However, if the FM DE-EMPHASIS/CHANNEL SPACE setting is not matched to the area where the unit is to be used; for instance, when you moved from area 1 to area 2 or vice versa, desired reception of AM/FM broadcasts is not expected. In this case, change the FM DE-EMPHASIS/CHANNEL SPACE setting in accordance with the area corresponding to the table. The FM DE-EMPHASIS is switched over at the same time.

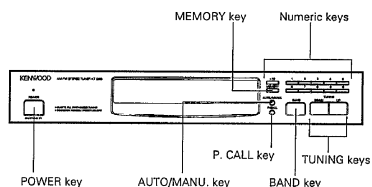
Area	CHANNEL SPACE freq.	FM DE-EMPHASIS
1. U.S.A., Canada, and South american countries	FM: 100 kHz AM: 10 kHz	75 μs
2. Other countries	FM: 50 kHz AM: 9 kHz	50 μs

- When changing the setting of the FM DE-EMPHASIS/CHANNEL SPACE switch, first disconnect the power cord, then reset the channel space switch, connect the power cord again, and turn the power on.





## Reception of radio broadcast



### ■ Receiving broadcast stations and storing them in memory (preset operation)

#### 1 Select the broadcast band.



The bands are switched as follows every time the **[BAND]** key is pressed.

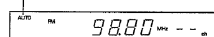
FM → AM (MW → SW1 → SW2)

- The bracketed bands are only for KT-593S.

#### 2 Select the tuning mode.



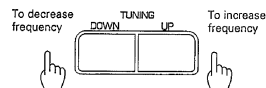
AUTO indicator



- Normally, select the auto mode (with AUTO lighted).

Press the key to select the auto (AUTO lighted) or manual (not lighted) mode.

#### 3 Tune the desired station.



Auto tuning mode	Manual tuning mode
Press once. (Tuning stops automatically when a station is received.)	Press repeatedly, or press and hold, until the desired station is received.

- The TUNED indicator lights up when a station is received.
- Use manual tuning mode when the radio wave is weak and noisy. At this time, the stereo FM broadcast is received in monaural mode.
- Only in manual tuning mode of the SW1 and SW2 bands, keeping on pressing the **[TUNING]** key will increase the scan speed. (only for KT-593S)

#### 4 Store the station in preset memory.

- 1 Press the **MEMORY** key.



**MEMORY** lights up for approx. 5 sec.

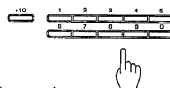
- Proceed the steps ② while the **MEMORY** indicator is lighted.

- 2 Press the numeric key.

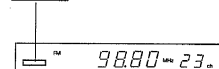
##### Examples of input

To select preset No. 15: **[+10] [5]**

To select preset No. 20: **[+10] [+10] [0]**



**MEMORY** goes off.



- When a station has previously been preset under the numeric key pressed, the newly preset station replaces the previous station.
- When preset is to be continued, repeat steps 1 to 4.
- Up to 30 broadcast stations can be preset regardless of the broadcasting bands.

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## In case of difficulty

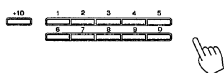
What appears to be a malfunction may not always be serious. If your unit should not perform as expected, consult the table below to see if the problem can be corrected before seeking help from your dealer or service representative.

## Reception of radio broadcast

### ■ Receiving a preset station

#### Select the desired station.

Press the numeric key under which the station is preset.



Examples of input

To select preset No. 3: **3**

To select preset No. 10: **+10 0**

To select preset No. 23: **+10 +10 3**

To select preset No. 30: **+10 +10 +10 0**

- The frequency of the station received will be displayed.

### ■ Listening to all preset stations in sequence (PRESET CALL)

Press the P.CALL key.



- With the key on the tuner main unit, preset stations are received in order to 1 → 2 → 3 ... 10 ... 20 ... 30 → 1 ..., every time the key is pressed.
- When a key is held depressed, the preset stations are received in sequence at 0.5-second intervals. The station being received when the key is released will continue to be received.

#### Memory backup

Even if the power cord is unplugged from the AC outlet, the preset memory contents will be backed up for three days.

#### Last channel memory

When the power is turned ON or the BAND key is pressed to switch the band (FM, AM (MW, SW1, SW2)), the last station previously received is automatically tuned in.

## Controls and indicators

## In case of difficulty

What appears to be a malfunction may not always be serious. If your unit should not perform as expected, consult the table below to see if the problem can be corrected before seeking help from your dealer or service representative.

Symptom	Cause	Remedy
Power cannot be tuned ON.	<ul style="list-style-type: none"><li>• The power cord is disconnected from the wall AC outlet.</li></ul>	<ul style="list-style-type: none"><li>• Insert the power cord securely into the wall AC outlet.</li></ul>
Radio stations cannot be received.	<ul style="list-style-type: none"><li>• No antenna is connected.</li><li>• The broadcast band is not set properly.</li><li>• The frequency of the desired station is not tuned.</li></ul>	<ul style="list-style-type: none"><li>• Connect an antenna.</li><li>• Set the broadcast band properly.</li><li>• Tune the frequency of the desired station.</li></ul>
A station which was preset cannot be received by pressing the corresponding numeric key.	<ul style="list-style-type: none"><li>• The preset station belongs to a frequency that cannot be received.</li><li>• The preset memory was cleared because the power cord had been unplugged for a long period of time.</li></ul>	<ul style="list-style-type: none"><li>• Preset a station with a receivable frequency.</li><li>• Preset the station again.</li></ul>
Interference.	<ul style="list-style-type: none"><li>• Noise due to ignition noise of an automobile.</li><li>• Noise due to an influence from an electric appliance.</li><li>• Noise due to a nearby TV set.</li></ul>	<ul style="list-style-type: none"><li>• Install the outdoor antenna apart from the road.</li><li>• Turn off the power of the appliance.</li><li>• Install the system more apart from the TV set.</li></ul>

### Notes:

1. This system is microprocessor-controlled, so malfunction may occur due to external noise or interference noise. In such a case, unplug the power cord, plug it and turn power on again.
2. Do not use contact cleaners because it could cause a malfunction. Be specially careful against contact cleaners containing oil, for they may deform the plastic components.

# Specifications

⚠ Caution : Read this page carefully to ensure safe operation.

## FM tuner section

Tuning frequency range .....87.5 MHz – 108 MHz  
Usable sensitivity (MONO) .....0.95  $\mu$ V/10.8 dBf  
Total harmonic distortion (at 1 kHz 65 dBf input)  
MONO .....0.4 %  
STEREO .....0.5 %  
Signal to Noise ratio (at 1 kHz, 65 dBf input)  
MONO .....78 dB  
STEREO .....73 dB  
Stereo separation  
1 kHz .....40 dB  
Alternate channel selectivity ( $\pm$  400 kHz) .....50 dB  
Frequency response  
(30 Hz – 15 kHz) .....+0.5 dB, -2 dB  
Output level/Impedance  
(at 1 kHz, 75 kHz dev.) .....0.6 V/3.3 k $\Omega$

## AW tuner section

**KT-593**  
Tuning frequency range  
9 kHz step .....531 kHz – 1,602 kHz  
10 kHz step .....530 kHz – 1,610 kHz  
10 kHz step (U.S.A. and Canada) 530 kHz – 1,700 kHz  
Usable sensitivity .....11  $\mu$ V/(280  $\mu$ V/m)  
Signal to noise ratio  
(at 30 % mod. 1 mV input) .....50 dB  
Total harmonic distortion .....0.5 %  
Output level/Impedance  
(at 30 % mod. 1 mV input) .....0.18 V/3.3 k $\Omega$

**KT-593S**  
Tuning frequency range  
9 kHz step .....531 kHz – 1,602 kHz  
10 kHz step .....530 kHz – 1,610 kHz  
Usable sensitivity .....17  $\mu$ V/(560  $\mu$ V/m)  
SW Tuning frequency range  
SW1 .....3.2 MHz – 7.3 MHz  
SW2 .....9.5 MHz – 21.85 MHz

**General**  
Power consumption .....10 W  
AC outlet  
For U.S.A. and Canada  
UNSWITCHED .....1 (800W 6.6A max.)  
For U.S. military  
UNSWITCHED .....1 (800W max.)  
For other countries  
UNSWITCHED .....1 (500W max.)  
Dimensions .....W: 440 mm (17 – 5/16")  
H: 75 mm (2 – 15/16")  
D: 264 mm (10 – 3/8")  
Weight (Net) .....2.6 kg (5.7 lb)

Note:  
KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

### For the U.S.A. FCC WARNING

This equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.