

KENWOOD

FM STEREO TUNER

L-1000T

INSTRUCTION MANUAL

KENWOOD CORPORATION

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.

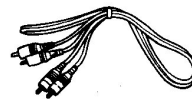
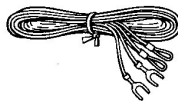
For the U.S.A.

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.

Accessories

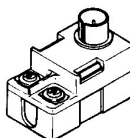
- FM T-shaped indoor antenna 1
- Audio cord 1



- Remote control unit .. 1
- Batteries 2 (AA or R6)



- 75 Ω /300 Ω antenna adapter 2



For the USA

Note to CATV system installer:

This reminder is provided to call the CATV system installer's attention to Article 820-22 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.

Contents

Caution: Read the pages marked Δ carefully to ensure safe operation.

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Before applying power

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.

Safety precaution for a Polarized AC plug

However, some products may be supplied with a non-polarized plug.

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

For the United Kingdom

Important!

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

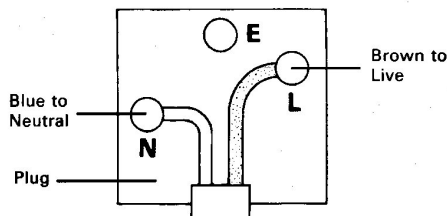
The mains plug must be removed from the wall socket prior to any internal examination.

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

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 220 V AC only.

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

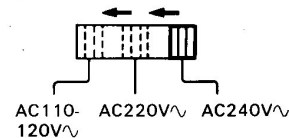
This unit operates on 110-120 or 220-240 volts AC. The AC voltage selector switch Type A or Type B on the rear panel is set to the voltage that prevails in the area to which the unit is shipped. Before connecting the power cord to your AC outlet, make sure that the setting position of this switch matches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

Note:

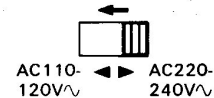
Our warranty does not cover damage caused by excessive line voltage due to improper setting of the AC voltage selector switch.

AC voltage selector switch

Type A







Type B



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

Safety precautions

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

 <div style="border: 1px solid black; padding: 2px; text-align: center;"> CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN </div> 	<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

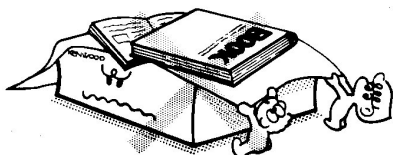
Please read all of the safety and operating instructions before operating this unit. For best results, follow all warnings placed on the unit and adhere to the operating and use instructions. These safety and operating instructions should be retained for future reference.

- 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.

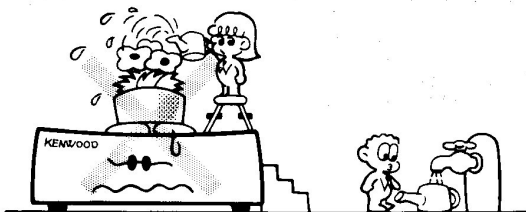
Never pull or stretch the cord.



- 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.

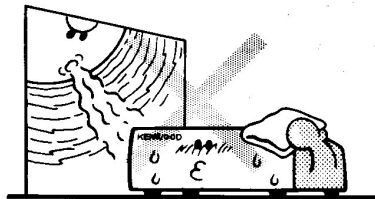


- 5. Water and moisture** – The unit should not be used near water - for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

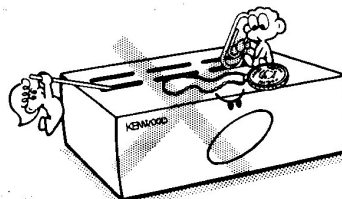


- 6. Temperature** – The unit may not function properly if used at extremely low, or freezing temperatures. The ideal ambient temperature is above +5°C (41°F).

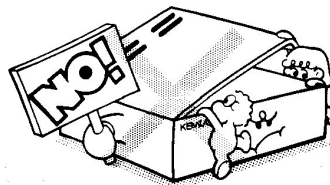
- 7. Heat** – The unit should be situated away from heat sources such as radiators, heat registers, stoves, or other units (including amplifiers) that produce heat.



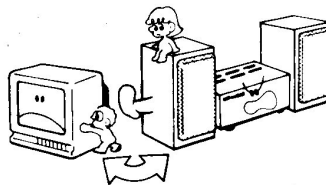
- 8. Electric shock** – Care should be taken so that objects do not fall and liquid is not spilled into the enclosure through openings. If a metal object, such as a hair pin or a needle, comes into contact with the inside of this unit, a dangerous electric shock may result. For families with children, 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 benzine, etc. to clean the cabinet. Use a clean dry cloth.



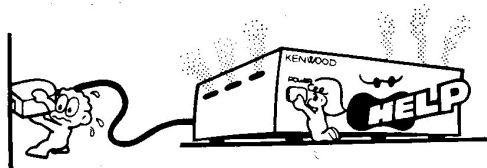
12. Carts and stands – An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.



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.

POWER OFF!

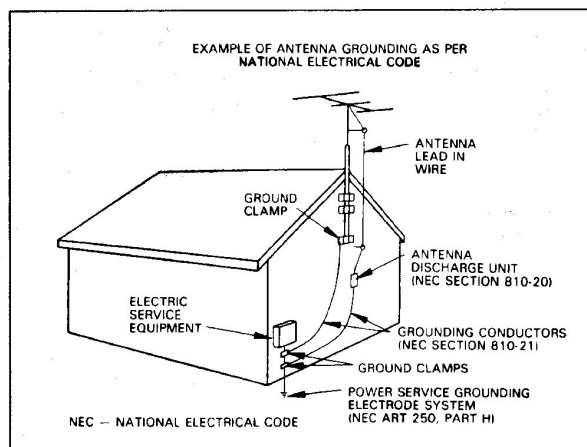


15. Damage requiring service – The unit should be serviced by qualified service personnel when:

- 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 No. 70 – 1984, 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.



- a** Use No.10 AWG (5.3 mm²) copper, No.8 AWG (8.4 mm²) aluminum, No.17 AWG (1.0 mm²) copper-clad steel or bronze wire, or larger, as a ground wire.
- b** Secure antenna lead-in and ground wires to house with stand-off insulators spaced from 4 – 6 feet (1.22 – 1.83 m) apart.
- c** Mount antenna discharge unit as close as possible to where lead-in enters house.
- d** Use jumper wire not smaller than No.6 AWG (13.3 mm²) copper, or the equivalent, when a separate antenna-grounding electrode is used. See NEC Section 810-21(j).

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

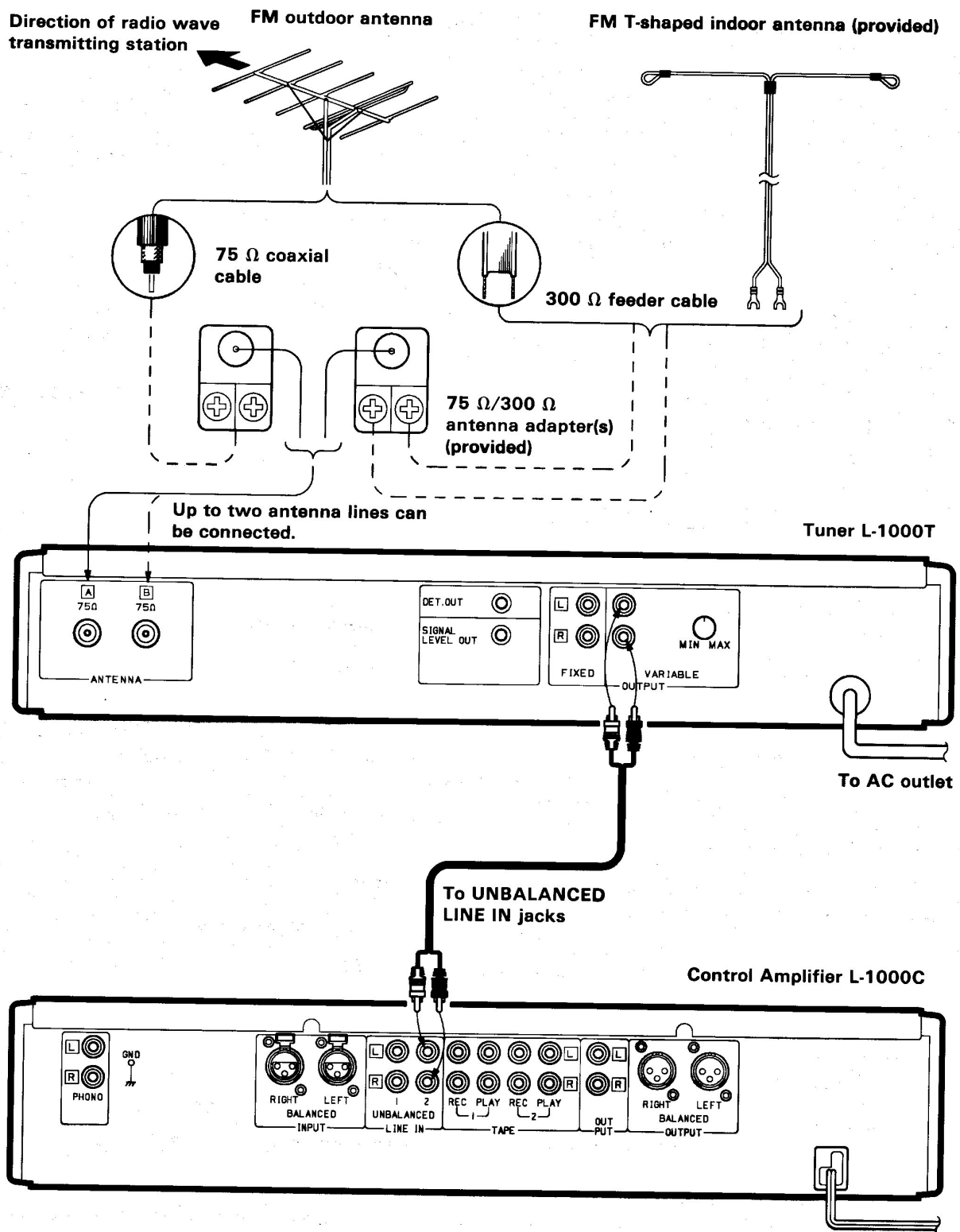
Notes:

- 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.

System connections

Connect this unit as shown below.

Do not plug the power cord into a power outlet until all of the required connections have completed.



■ Connection of FM T-shaped indoor antenna

Connect the Y-shaped lug of the FM T-shaped indoor antenna to the screw terminals on the 75 Ω /300 Ω antenna adapter, and plug the antenna adapter to the FM ANTENNA jack. It is recommended to use the FM T-shaped indoor antenna only as a temporary means until the outdoor antenna is installed.

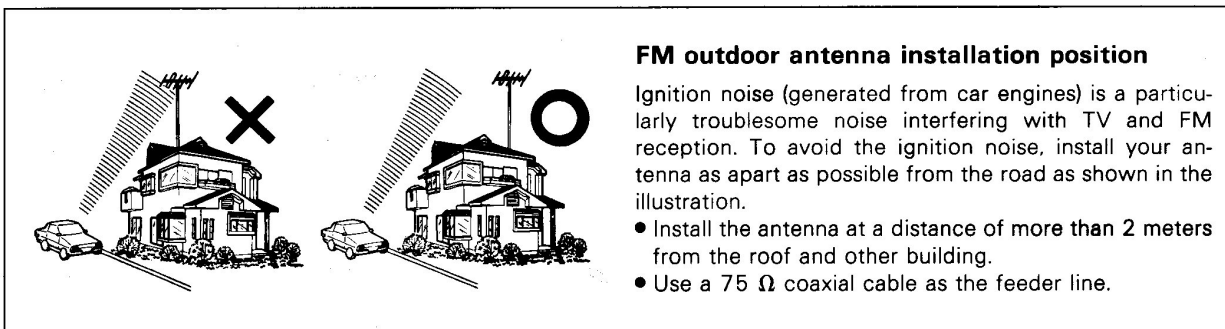
■ Connection of FM outdoor antenna

The most important factor for tuner listening is to capture the desired radio wave sufficiently and securely. For this purpose, be sure to use an FM outdoor antenna.

Even when the radio wave is strong enough, if your area is surrounded by high buildings or mountains, the reflected waves may distort the sound or deteriorate the stereo separation. In such a case, use a two-element type phase-difference feeder antenna.

If your area is far from the station and radio wave is low, use a three-, five- or seven-element antenna according to the electric field intensity. The more the number of elements, the more the gain and keener the directivity.

For details, also read the instruction manual of your antenna.



Note:

The unit's power supply is secondarily connected. Note following.

The unit is not completely disconnected from the mains as long as the power cord is connected to a wall outlet.

Observera:

Apparatens strömförsörjning kopplas från sekundärt. V.g. ge akt på följande.

Apparaten fränkopplas inte helt och hållet från strömnätet medan apparatens nätsladd är ansluten till växelströmsuttaget.

Huom:

Virta yksikköön on kytketty pois sekundaaripuoleilta. Huomioi seuraava.

Tämä yksikkö ei ole kokonaan kypketty pois pää virranjakajasta kun pää katkaisin on liitettyä virtatiiriin.

Bemærk:

Strømmen til apparatet afbrydes på den sekundære side. Vær opmærksom på følgende.

Denne enhed er ikke fullstendig koblet fra lysnettet så lenge stikket er tilsluttet stikkontakten.

Anmerkning:

Strømmen til apparatet er stått av på sekundærsiden. Vær oppmerksom på det følgende.

Dette apparatet koples ikke fullstendig fra nettet så lenge støpselet står i en stikkontakt, selv om strømbryteren settes i av-stilling.

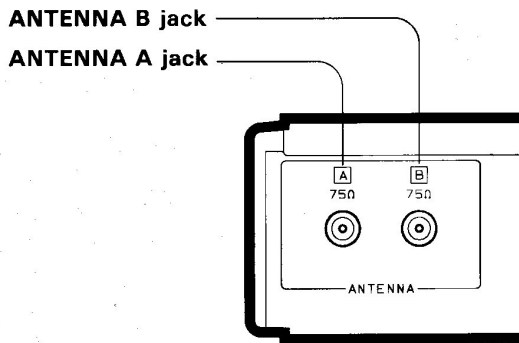
System connections

■ Connection of coaxial cable

<p>① Process the coaxial cable as shown below.</p> <p>— Mesh + Core</p> <p>With a cable RG-59, strip coating and bend the mesh conductors toward outside.</p> <p>— Mesh + Core</p> <p>With a cable RG-6, strip coating and expose the core conductor.</p>	<p>② Open the cover of the 75 Ω/300 Ω antenna adapter.</p> <p>Push both sides in the directions of arrows with two fingers to unlock, and slide the cover.</p>	<p>③ Remove the ring from the main part of the antenna adapter, and attach the ring on the column on the cover.</p>
<p>④ Remove the fixing hardware, and insert the core of coaxial cable into the slot.</p>	<p>⑤ Secure the fixing hardware and its screws using a screwdriver.</p> <p>Close the cover removed before.</p>	<p>⑥ Plug into the ANTENNA jack.</p>

■ Connection of 300 Ω feeder cable

<p>①</p> <p>② Insert feeder cable.</p> <p>③ Tighten screws.</p> <p>④ Loosen screws.</p> <p>Provided FM T-shaped indoor antenna</p> <p>Antenna adapter</p>	<p>②</p> <p>Rear panel</p> <p>Plug securely into FM ANTENNA jack.</p>	<p>③</p> <p>① Find the position providing optimum reception.</p> <p>② Fix two ends.</p> <p>Set to reception mode.</p> <p>This unit</p>
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■ ANTENNA jacks

Two antenna lines can be connected to A and B. The antenna lines can be switched by the ANTENNA A/B key on the remote control unit.

■ VARIABLE/FIXED-output jacks

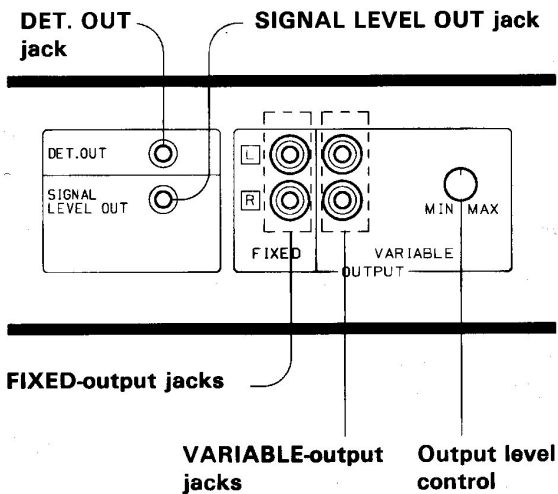
This unit has two types of output jacks; the FIXED output jacks and VARIABLE output jacks.

Normally, connections are to be made on the VARIABLE output jacks.

■ Output level control

This control knob adjusts the output level from the VARIABLE output jacks of this unit.

- The output is minimized at MIN position, and maximized at MAX position.
- The output level can also be adjusted with the OUTPUT LEVEL key on the remote control unit.



■ DET. OUT jack

This jack outputs the FM wave detected output (output impedance: 600 ohms).

It can also be used as the multi-path horizontal (H) signal output jack.

■ SIGNAL LEVEL OUT jack

This jack outputs the electric field strength level in the form of DC voltage (output impedance: 10 kilohms).

This jack is used to monitor the radio wave. It can also be used as the multi-path vertical (V) signal output jack.

Fig. Oscilloscope connection

■ Multipath reception

Multipath reflections result from the nature of radio waves in the FM band. They travel in straight lines and are reflected from hills, large metal structures and the like. When a signal is received after bouncing off a building, it arrives at the antenna later than the signal that came by a direct route. The addition of the direct and reflected signals produces complex variations in amplitude and phase throughout the broadcasting signal. The result can be audible distortion even though signal strength is high and tuning is correct.

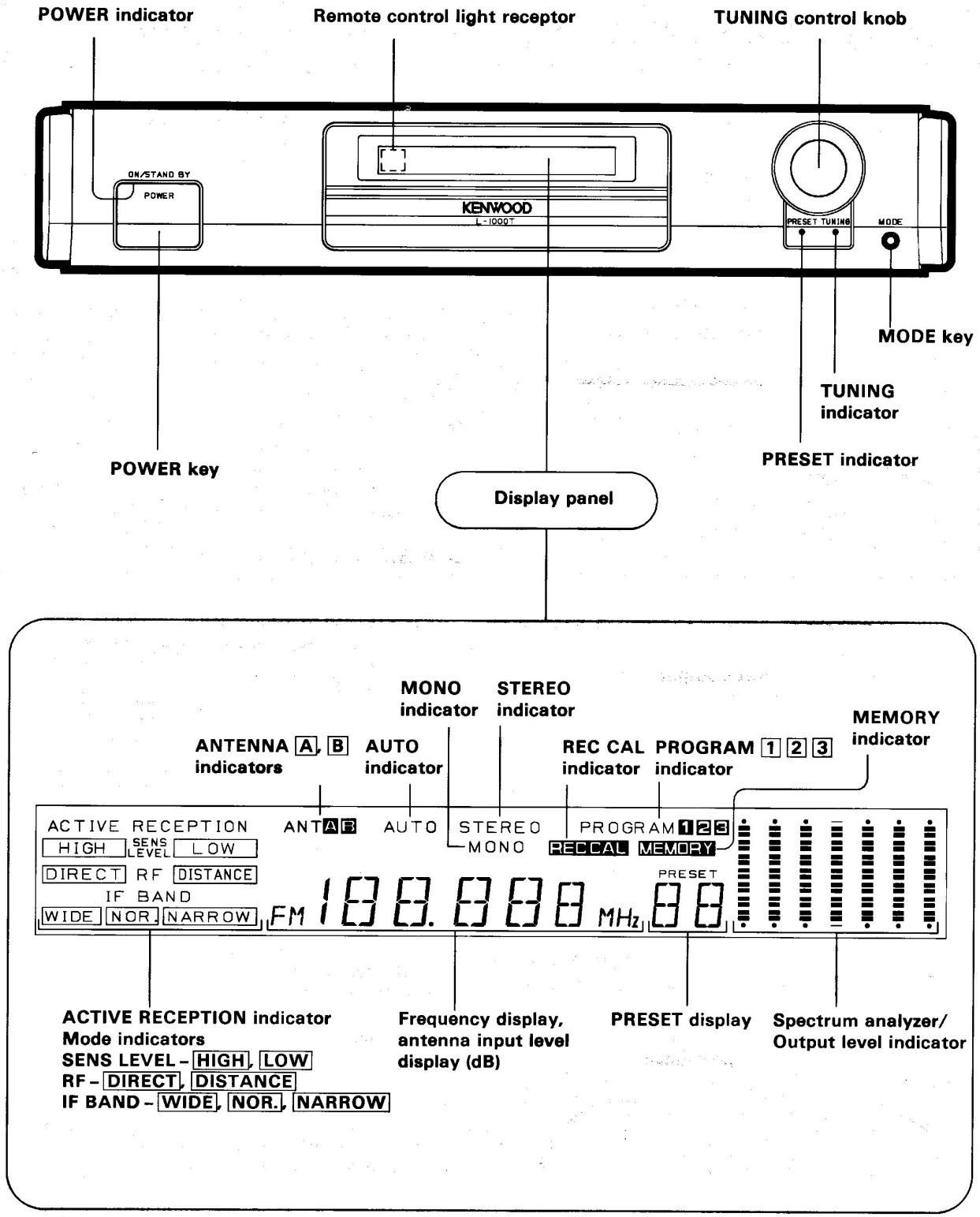
■ Adjustment using an oscilloscope

1. Connect the SIGNAL LEVEL OUT (V) and DET. OUT (H) jacks to the vertical and horizontal inputs, respectively, or the scope.
2. Tune in the affected station.
3. Loosen the antenna mounts and have someone orient the antenna for minimum vertical response as shown in Fig.

If multipath distortion cannot be corrected by this means, it might be necessary to use a more directional antenna, change antenna height or move the antenna mounts to another location on the building.

Fig. Multipath waveform

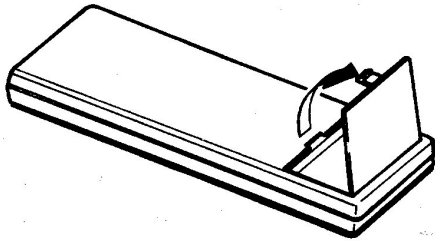
Controls and indicators



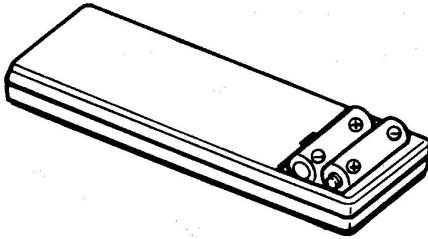
Remote control unit

■ Loading batteries

1. Open the cover.



2. Insert batteries with correct polarity.



3. Close the cover.

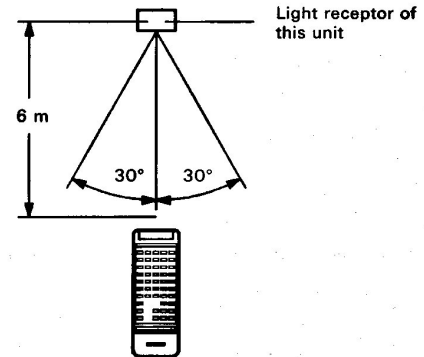
Note:

The provided batteries are intended for use in checking the remote control functions. Their service life may be shorter than new batteries.

When the remote-controllable distance shortens or remote control becomes impossible, replace both of the batteries with new batteries.

■ Remote control operation range

This is variable depending on the temperature, humidity and other conditions in the room. The figure below shows the approximate range of remote control operation.

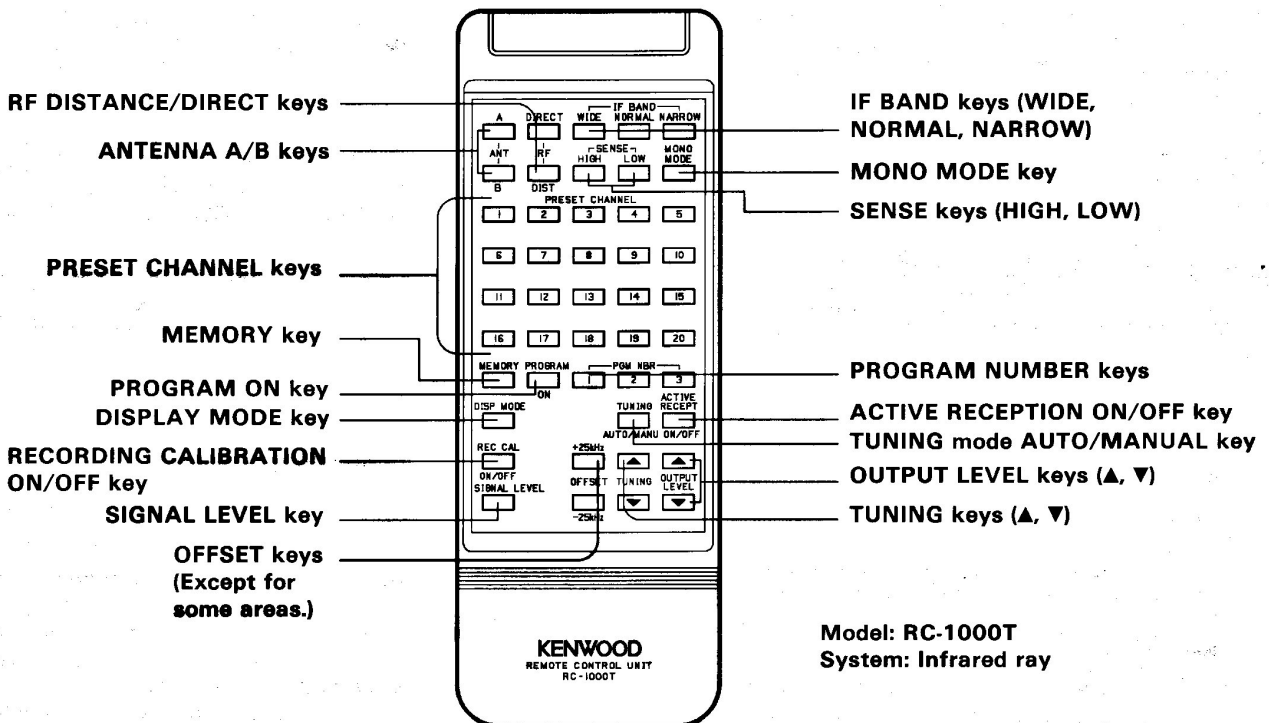


Note:

The remote control unit may function improperly if the light receptor is subject to the direct rays of sun or the light of a fluorescent lamp of high-frequency lighting type (inverter type, etc.). In such a case, change the installation position of this unit to avoid malfunction.

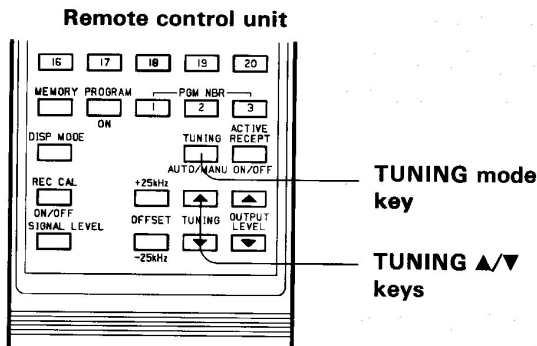
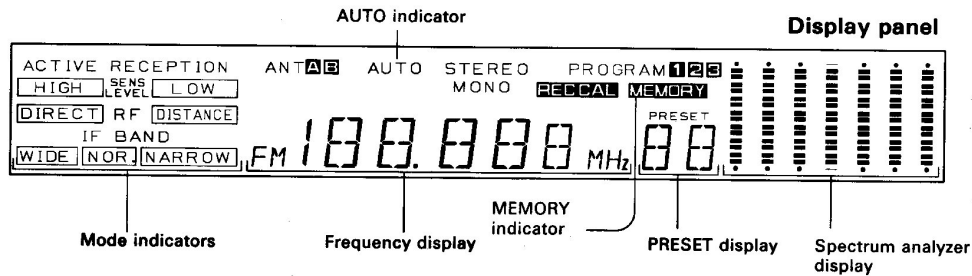
When two or more keys on the remote control unit are to be pressed, reserve an interval of more than 1 second between the press of each key. To prevent malfunction, do not press a key immediately after having pressed a key.

■ Names of controls



Operating instructions

All operations, except turning the power ON/OFF, can also be performed from the remote control unit.



< Manual tuning >

Every time a key is pressed, the tuned frequency increases or decreases by one step.

1 step:

USA: 100 kHz
Europe
Australia } : 25 kHz

Holding a key depressed varies the frequencies continuously.

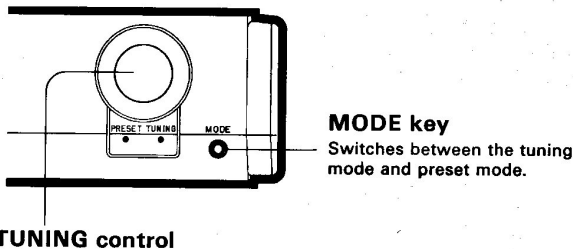
< Auto tuning >

When a key is pressed once, auto tuning starts in the corresponding direction, and stops when the first station is received above a certain level. Pressing the key again re-starts auto tuning to search the next station.

1 step:

USA: 100 kHz
Europe
Australia } : 50 kHz

Front panel of this unit



< Manual tuning >

Every time the knob is turned clockwise, the frequency is increased by one step. Every time the knob is turned counterclockwise, it is decreased by one step.

Turning the knob continuously varies the frequencies continuously.

< Auto tuning >

When the knob is turned once, auto tuning starts in the corresponding direction, and stops when the first station is received above a certain level.

Turning the knob again re-starts auto tuning to search the next station.

Manual tuning

Operation on remote control unit

1. Press the **TUNING** mode key on the remote control unit to select the **MANUAL** mode.
 - Press so that the **AUTO** indicator is not lighted.
2. Press the **TUNING UP** or **DOWN** key (▲, ▼) to tune a station.
3. Adjust the listening volume with the **Volume control** on the amplifier.

Operation on main unit

1. Press the **TUNING** mode key on the remote control unit to select the **MANUAL** mode.
2. Press the **MODE** key on the main unit to select the **tuning** mode.
 - The **TUNING** indicator lights up.
 - The **MODE** key is used to switch the mode between the tuning and preset modes. Every time the key is pressed, these indicators light alternately.
3. Turn the **TUNING** control to tune a station.
4. Adjust the listening volume with the **Volume control** on the amplifier.

Auto tuning

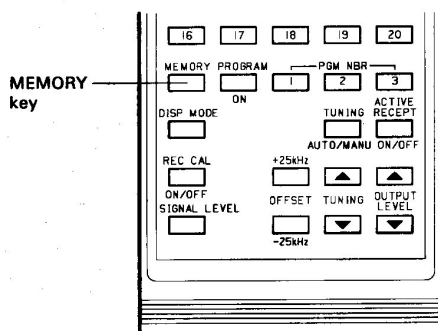
Operation on remote control unit

1. Press the **TUNING** mode key to select the **AUTO** mode.
 - Press so that the **AUTO** indicator is lighted.
2. Press the **TUNING UP** or **DOWN** key (▲, ▼) once.
 - Auto tuning starts in the corresponding direction, and stops when the first station is received above a certain level.
 - Pressing the key again re-starts auto tuning of the next station.
3. Adjust the listening volume with the **Volume control** on the amplifier.

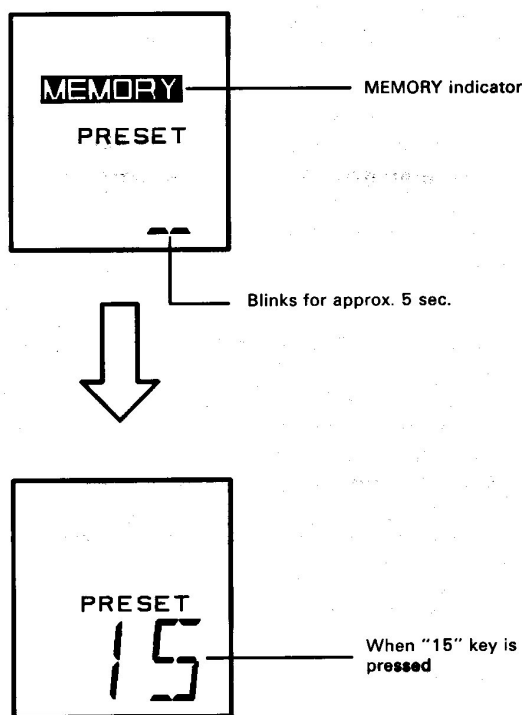
Operation on main unit

1. Press the **TUNING** mode key on the remote control unit to select the **AUTO** mode.
 - Press so that the **AUTO** indicator is lighted.
2. Press the **MODE** key on the main unit to select the **tuning** mode.
3. Turn the **TUNING** control on the main unit with a light force, clockwise to increase frequencies or counterclockwise to decrease frequencies.
4. Adjust the listening volume with the **Volume control** on the amplifier.

Remote control unit



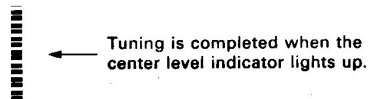
PRESET display



How to tune a station

While observing the level indicator on the display panel, tune the station to be preset with the TUNING control on the main unit or TUNING keys on the remote control unit.

Displays the antenna input level of the local station signal in the range of ± 300 kHz or ± 150 kHz.



Station preset operation (From remote control unit only)

Up to 20 stations can be preset in the memory. Together with the frequency of each station, the receiving condition can also be preset in memory.

Reception condition contents

RF, IF BAND, SENSE LEVEL, MONO-ST, AUTO/MANUAL, ANTENNA A/B

1. Tune in the desired station.

2. Press the MEMORY key.

- The MEMORY indicator lights up for approx. 5 sec.

3. While the MEMORY indicator is lighted, press one of the preset channels keys 1 to 20 on the remote control unit; the station being received will be preset under that number.

Preset tuning

Operation with keys 1 to 20 on the remote control unit

1. Press one of the preset channel keys, 1 to 20, where the desired station has been preset.

2. Adjust the listening volume with the Volume control on the amplifier.

Operation with PRESET Δ/∇ keys on the RC-1000C remote control unit provided with the L-1000C

1. In the preset mode, pressing the PRESET Δ key causes the following:

- The memory contents of the preset No. just before the last preset No. used before will be recalled.
- If the ∇ key is pressed, the preset No. immediately after the last preset No. used before will be recalled.
- When the Δ/∇ key is held depressed, the preset Nos. increase or decrease until the key is released.

2. In the tuning mode, pressing either of the PRESET Δ/∇ keys switches the mode to the preset mode, and recalls the last preset No. used before.

When either of the keys is pressed again, the station of the current preset No. +1 will be recalled if the Δ key is pressed, or the station of the current preset No. -1 will be recalled if the ∇ key is pressed.

3. Adjust the listening volume with the Volume control on the amplifier.

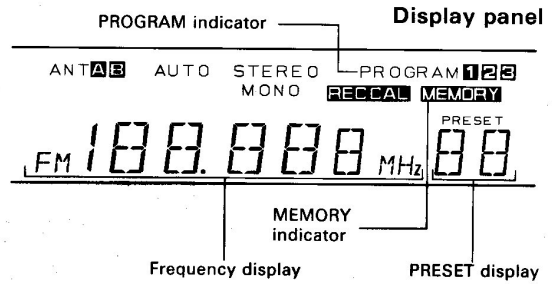
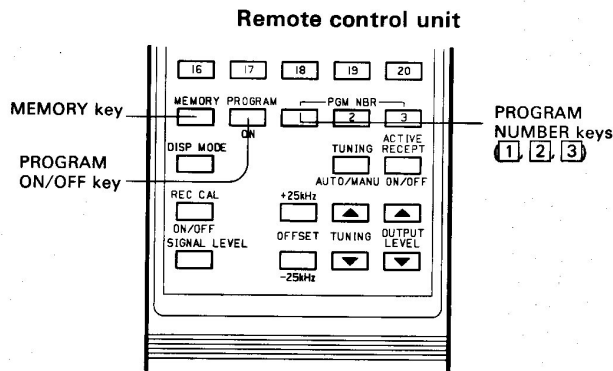
Operation on main unit

1. Press the MODE key on the main unit to select the preset mode.

2. Turning the TUNING control clockwise recalls the station of the current preset No. +1, or turning it counterclockwise recalls the station of the current preset No. -1.

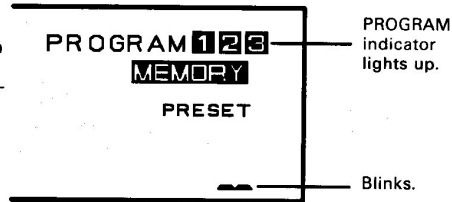
Turning the TUNING control recalls several preset memory contents in sequence.

3. Adjust the listening volume with the Volume control on the amplifier.

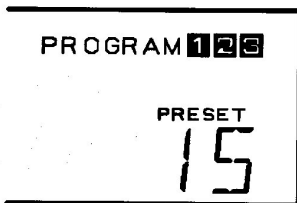
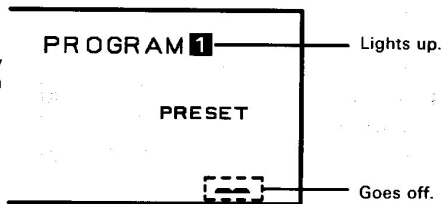


PRESET display

① Press MEM-ORY key with PROGRAM key ON to enter program standby mode.



② Press PRO-GRAM 1 key to program in 1.



■ Programming operation (From remote control unit only)

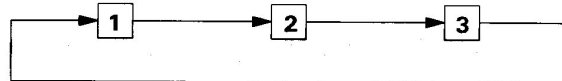
Up to three stations can be programmed in memory. Together with the frequency of each station, the receiving condition can also be preset in memory.

1. Tune in the desired station.
2. Press the PROGRAM key to ON to enter the program mode.
3. Press the MEMORY key.
 - The MEMORY indicator lights up for approx. 5 sec.
4. While the MEMORY indicator is lighted, press one of the PROGRAM NUMBER keys 1 to 3 on the remote control unit; the station being received will be programmed under that number.

■ Program tuning (Remote control unit only)

Use this tuning method when you want an unattended recording of radio broadcast using the program timer.

1. Press the PROGRAM ON key to enter the program mode.
2. Press the POWER key to turn the power OFF.
3. When the program timer goes ON at the ON time and the power is turned ON, the programs are recalled in the following order.



Note:

When the program is not to be used, be sure that the PROGRAM indicators are off.

***Last station**

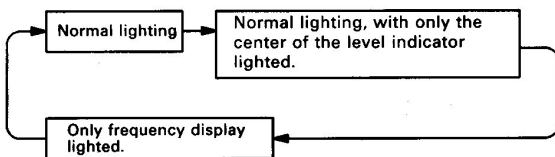
As the memory of this unit is backed up, the frequency received before the power is turned off is memorized. This is referred to as the last station frequency. When the power is turned on again, the unit tunes in the last station frequency.

■ **Principal keys function on remote control unit**
(For the description of other remote control keys, refer to the main text.)

DISPlay MODE key

Every time the key is pressed, the displayed contents change as follows.

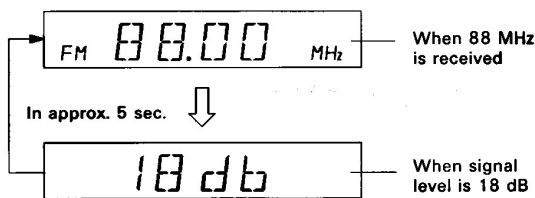
<Indicator lighting conditions>



SIGNAL LEVEL key

When the key is pressed, the frequency display shows the antenna input level in decibels. The frequency display will resume in approx. 5 sec.

<Example>



MONO MODE key

When this key is pressed to ON, the MONO indicator lights up and the broadcast being received is forced to be reproduced in monaural. Press the key again to turn the mono mode OFF.

ACTIVE RECEPTION ON/OFF key

When the key is ON during the AUTO TUNING mode, optimum RF and IF band for the station being received will be selected automatically. Press the key again to turn off the selection. When the power is turned ON or while a preset station is being recorded, this function does not work even when the indicator is lighted.

TUNING AUTO/MONO key

Every time the key is pressed, the tuning mode is switched as follows.
AUTO indicator on → Auto tuning mode
AUTO indicator off → Manual tuning mode

SENSitivity LEVEL key

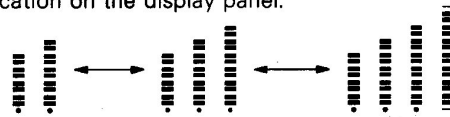
The auto-stop level for the AUTO TUNING mode can be switched to "HIGH" or "LOW". Use the "LOW" setting when the tuning is stopped too often due to too good reception condition of night, etc.

OFFSET keys (Auto tuning mode only Except for some areas.)

These keys are used to eliminate interference. Pressing the +25 kHz key increases the frequency by 25 kHz. Pressing the -25 kHz key decreases the frequency by 25 kHz.

OUTPUT LEVEL keys

These keys adjust the output level from the VARIABLE output jacks of this unit. Holding the ▲ key depressed increases the level indication on the display panel. Holding the ▼ key depressed decreases the level indication on the display panel.



Level indicator

REC CAL (Recording Calibrate) key

An optimum recording level should be set to record FM broadcast with high-quality sound. However, as the output level of FM broadcast always varies, it is hard to set the optimum recording level. When the REC CAL key on the remote control unit is pressed to ON, a signal of about 400 Hz (at a level corresponding to FM 50 % modulation) is output continuously from the output jacks. With this output level, adjust the recording level of the tape deck so that the VU meter points -6 dB or 50 %; this is the optimum recording level for FM broadcast.

RF SELECTOR key

DIRECT: When this key is pressed, the RF intermodulation or intermodulation noise will be reduced and the best quality sound is obtained. In a strong-signal area, set to this position for greater sound quality.
DISTANCE: When a distant station is required, set to this position. The receiving ability is improved so that the weak-signal station can be received with lower noise.

IF BAND key

WIDE: Set to this position for normal reception. High quality sound without distortion can be received.
NORMAL: If the desired station is disturbed by a nearby station, set the key to this position. Selectivity is improved, resulting in interference-free reception.
NARROW: If the required station is interfered in NORMAL mode, set to this position to receive the station more clearly. (Selectivity is improved more.)

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
Sound is not heard.	1. Antenna is not connected. 2. The unit is not connected to an amplifier. 3. No station is being tuned.	1. Connect an outdoor antenna or T-shaped indoor antenna. 2. Connect with an amplifier using an audio cord. 3. Tune in the frequency of a station.
Indicator lights only unstably.	Antenna is not connected securely.	Check for wire disconnection and contact failure.
Continuous, rain-like noise interferes with reception.	Radio wave entering antenna is low, causing input level insufficiency.	Check FM antenna again. If you are in a distant area from the station, use an FM-exclusive outdoor antenna (5 to 8 elements).
Storm-like or scratching noise interferes.	Car ignition noise.	Install the antenna apart from road.
While receiving a stereo station, the STEREO indicator does not light up and the reception is monaural.	1. Radio wave is weak so the tuner forces mono reception mode. 2. The MONO MODE key on the remote control unit is ON (in the mono mode).	1. Install an FM-exclusive outdoor antenna to capture radio waves securely. 2. Press the MONO MODE key again so that the MONO indicator goes out.
During reception by manual tuning or OFFSET key ON, two levels are displayed on the spectrum analyzer.	1. It is due to the receiving condition. 2. OFFSET 25 kHz tuning.	It is not malfunction.

Note:

Do not use contact cleaner because it could cause a malfunction. Be specially careful against contact cleaners containing oil, for they may deform the plastic components.

Specifications

Antenna impedance	75 Ω, Unbalanced
FM frequency range	87.5 MHz to 108 MHz
Usable sensitivity (IHF) (DISTANCE)	10.8 dBf (0.95 μV)
50 dB quieting sensitivity (IHF) (DISTANCE)	
MONO	16.2 dBf (1.8 μV)
STEREO	38.8 dBf (24 μV)
Sensitivity (DIN)	
MONO: S/N 26 dB, 40 kHz Dev.	0.7 μV
STEREO: S/N 46 dB, 46 kHz Dev.	25 μV
Signal to noise ratio (IHF)	
MONO: (75 kHz Dev.)	92 dB (65 dBf input)
	92 dB (85 dBf input)
STEREO: (75 kHz Dev.)	78 dB (65 dBf input)
	86 dB (85 dBf input)
Signal to noise ratio (DIN)	
MONO: (40 kHz Dev.)	78 dB (Unweighted 85.2 dBf input)
STEREO: (46 kHz Dev.)	68 dB (Unweighted 85.2 dBf input)
Total harmonic distortion (Except Europe and U.K.) (WIDE)	
MONO (75 kHz Dev.)	
1 kHz	0.004%
50 Hz ~ 10 kHz	0.009%
STEREO (75 kHz Dev.)	
1 kHz	0.008%
50 Hz ~ 10 kHz	0.04%
Total harmonic distortion (DIN) (WIDE)	
MONO (40 kHz Dev., 1 kHz)	0.005%
STEREO (46 kHz Dev., 1 kHz)	0.02%
Capture ratio (Except Europe & U.K.)	
WIDE	1.0 dB
NORMAL	2.5 dB
NARROW	3.0 dB
Capture ratio (Europe & U.K.)	
WIDE	1.5 dB
NORMAL	3.0 dB
NARROW	4.5 dB

Alternate channel selectivity (IHF)

WIDE	73 dB (±400 kHz)
NORMAL	80 dB (±400 kHz)
NARROW	75 dB (±300 kHz)

Alternate channel selectivity (DIN)

WIDE	45 dB (±300 kHz)
NORMAL	80 dB (±300 kHz)
NARROW	70 dB (±200 kHz)

Stereo separation (IHF)

WIDE, 1 kHz	71 dB
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Stereo separation (DIN)

WIDE, 1kHz (65.2 dBf input)	68 dB
WIDE, 6.3 kHz (65.2 dBf input)	48 dB

Frequency response 20 Hz to 15 kHz ±0.5 dB

Spurious rejection ratio (98 MHz) 110 dB

Image rejection ratio (98 MHz) 85 dB

IF rejection ratio (98 MHz) 110dB

AM suppression ratio 80 dB

Sub-carrier suppression ratio (IHF) 72 dB

Sub-carrier suppression ratio (DIN)

 19 kHz, 46 kHz Dev. 65 dB

 38 kHz, 46 kHz Dev. 80 dB

Output level/impedance at 1 kHz, 100% Dev.

 FIXED 800 mV/100 Ω

 VARIABLE 0 ~ 1.6 V/100 Ω

 DET. OUT 0.5 V/600 Ω

 SIGNAL LEVEL OUT 5.0 V DC/10 kΩ (90 dBf, DISTANCE)

General

Power consumption 35 W

Dimensions W: 440 mm (17-5/16")

H: 97 mm (3-13/16")

D: 410 mm (16-1/8")

Weight (Net) 10.5 kg (23.1 lb)

Note:

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