

STEREO INTEGRATED AMPLIFIER

KA-895

INSTRUCTION MANUAL

KENWOOD CORPORATION

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.

_____ Serial Number _

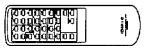
Unpacking

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.

Accessories



Except for the U.S.A., Mexico, Canada, Australia and U.S. Military

Batteries (R6/AA)2





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Read the pages marked \triangle carefully to ensure safe operations.

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B60-1971-00 (K, P, M, Y, R) [G] 95/12 11 10 9 8 7 6 5 4 3 2 1 94/12 11 10 9 8 DOLBY SURROUND PRO LOGIC: This function allows to enjoy a similar Dolby Surround effect to movie theaters from video

software programs carrying the loss surround mark.

DOLBY 3 STEREO : The Dolby 3 STEREO provides an active center channel to produce a better, stable center

image. This mode can be used when listening to stereo video program and music or when

surround listening or surround system set-up is not possible.

Remote control unit : The remote control unit is provided with this unit.

Before applying power

Units are designed for operations as follows.

U.S.A. and Canada	AC 120 V only
Australia	AC 240 V only
U.K. and Europe	AC 230 V only
*Other countries AC 110-1	120/220/230-240 V switchable

For the United Kingdom

Factory fitted moulded mains plug

- The mains plug contains a fuse. For replacement, use only a 13-Amp ASTA-approved (BS1362) fuse.
- 2. The fuse cover must be refitted when replacing the fuse in moulded plug.
- Do not cut off the mains plug from this equipment. If the plug fitted is not suitable for the power points in your home or the cable is too short to reach a power point, then obtain an appropriate safety approved extension lead or adaptor, or consult your dealer.

If nonetheless the mains plug is cut off, remove the fuse and dispose of the plug immediately, to avoid a possible shock hazard by inadvertent connection to the mains supply.

IMPORTANT

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

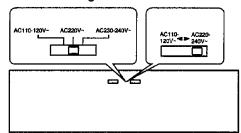
Brown: Live

Do not connect those leads to the earth terminal of a three-pin

*AC voltage selection

This unit operates on 110-120/220/230-240 volts AC. The AC voltage selector switch 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



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.



CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN



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.

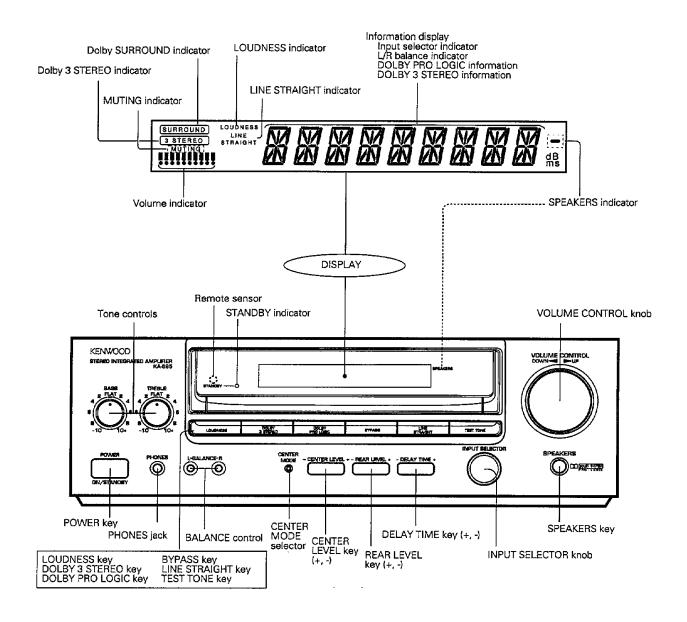


THE LIGHTNING FLASH WITH ARROWHEAD SYMBOL, WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE USER TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK TO PERSONS.



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.

Controls and indicators



LOUDNESS key

Human ears are less sensitive to low frequencies when listening at low volume levels. When the VOLUME CONTROL is set to a low position, press the LOUDNESS key to boost the low frequencies.

SPEAKERS key

OFF: This position silences all speakers to permit private use of headphones. (Speakers indicator goes off.)

ON: Activates the speakers connected to SPEAKERS terminals on the rear panel. (Speakers indicator lights.)

STANDBY mode of POWER key

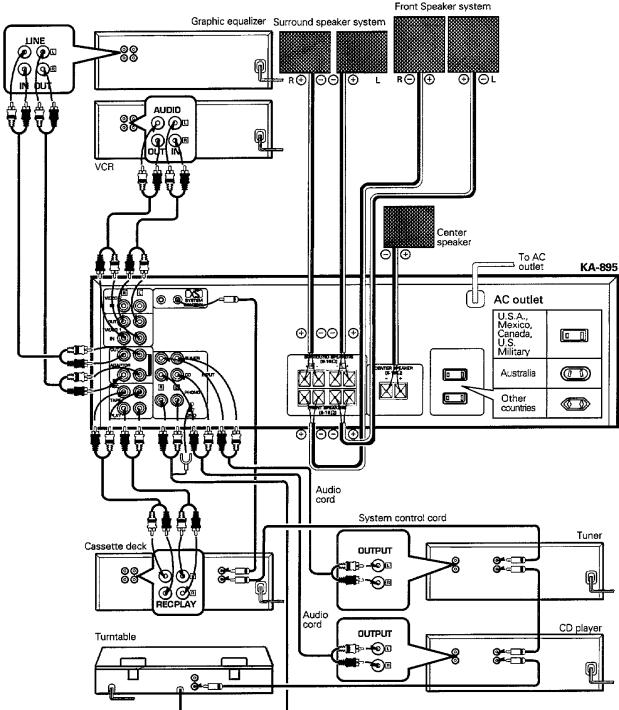
When the power cord of this system is plugged into an AC outlet, the STANDBY indicator lights up regardless of the ON/OFF setting of the POWER switch. This indicates that a small amount of current is being supplied to the unit to back up the memory contents. This mode is referred to as the Standby mode. While the STANDBY indicator is lit, the power of the system can be switched ON/OFF from the remote control unit.

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.

Regarding malfunctions of the microprocessor

See "In case of difficulty" to reset the microprocessor if the display indications are distorded or the unit won't operate even though you completed the connections correctly.



Notes:

- 1. Connect all cords firmly. If connections are loose, there could be loss sound or noise produce.
- 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.

Speakers connection

1 Push the lever. 2 Insert the cord. 3 Lock the lever.



System control connection



- 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.

SYSTEM CONTROL Operation (This operation is not available for some cassette decks.)

By connecting this unit to other KENWOOD system components equipped with SYSTEM CONTROL terminals, such as a cassette deck, CD player and/or turntable, the following convenient operations will be available.

Automatic play operation

To play the turntable, cassette deck, or CD player connected to this unit, press the desired input selector keys on this unit. The turntable, cassette deck, or CD player will automatically enter play mode.

In the same way, pressing the Play key of the turntable, cassette deck, or CD player will automatically switch the input selector on this unit to the corresponding component.

Synchro recording

To record sound from the CD player or turntable onto a tape with the cassette deck, press the CD or PHONO input selector key and load a CD or record. Set the cassette deck to rec pause mode, then press the Play (start) key of the CD player or turntable. The cassette deck will start recording automatically, synchronized with the CD player or turntable. For more details, refer to the instruction manual of the tape deck.

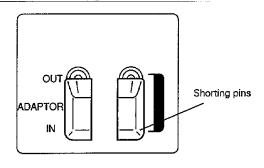
Remote control

When the cassette deck and CD player are connected via the system control cords, these components can be controlled from the remote control unit supplied with this unit.

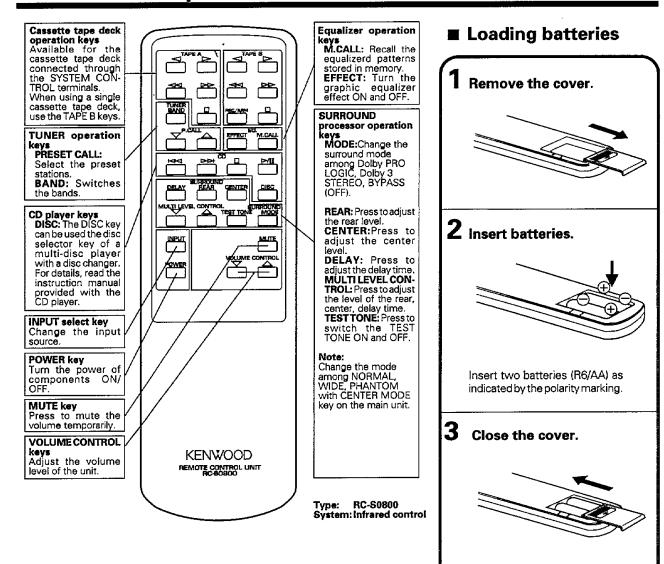
ADAPTOR jacks on the amplifier rear panel

When an adaptor-type component such as a graphic equalizer is connected, unplug the shorting pins from the ADAPTOR jacks and connect the component to these jacks.

- When the ADAPTOR jacks are not used, be sure to plug the shorting pins into the jacks. Otherwise, the sound will not be produced.
- When the ADAPTOR jacks are used, retain the shorting pins and be careful not to lose them.
- Never plug a shorting pin into other jacks than ADAPTOR jacks. Otherwise, the unit may be damage.



Remote control operation

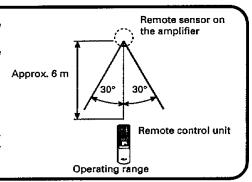


■ Operating procedure

Plug the power cord of the system into an AC wall outlet, and press the POWER key on the remote control unit to turn the power on.

When the power is turned on, press the key of the source component to be operated.

- When two operation keys on the remote control unit are pressed successively, press each key securely reserving an interval of more than 1 second for each press.
- Components connected via the system control cords can also be remotecontrolled. In this case, please read the instruction manual supplied with your component.

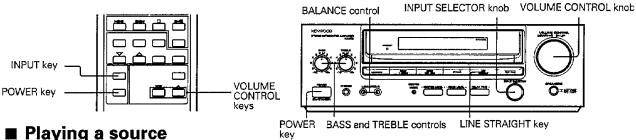


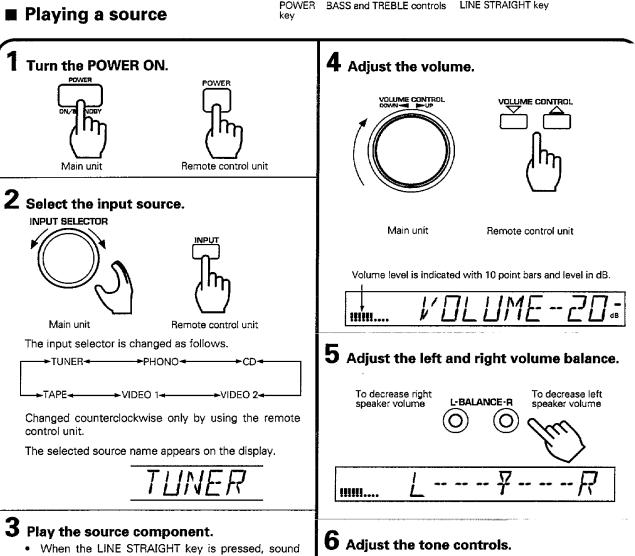
Notes:

- 1. The supplied batteries are intended for use in operation checks. Therefore, their lives may be shorter than ordinary batteries.
- 2. When the remote-controllable distance gets shorter than before, replace both batteries with new ones.
- 3. Malfunction may occur if direct sunlight or the light of a high-frequency lighting fluorescent lamp enters the remote control light sensor. In such a case, change the system installation position to prevent the malfunction.

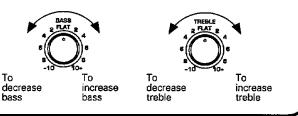
6 KA-895 (En)

Operating instructions





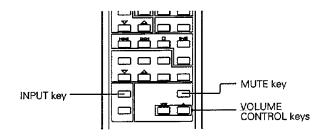
- When the LINE STRAIGHT key is pressed, sound close to pure sound is produced. (The LINE STRAIGHT indicator appears.) When the LINE STRAIGHT key is pressed, tone controls are not available. To cancel this function, press the LINE STRAIGHT key again.
- If you press the LINE STRAIGHT key in the Dolby Surround mode, the Dolby Surround function is canceled.
- The selected source component starts playing automatically if it is connected by a system control cord.



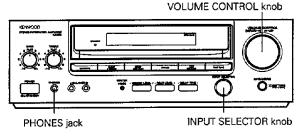
Notes on input selector

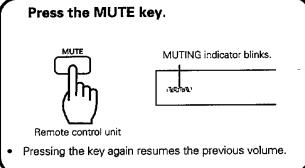
The source last selected with the input selector is backed up for a few days even when the power cord is unplugged. After this period, the tuner is automatically selected when the power is turned on.

Operating instrutions



■ Ordinary tape recording





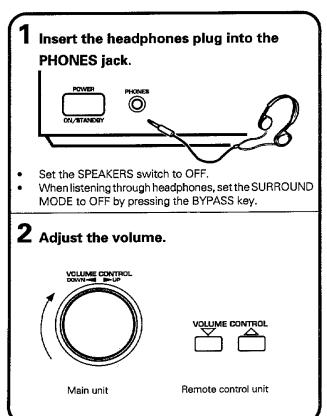
■ To mute the sound temporarily

2 Set the cassette deck to the recordpause mode.

Select the source to be recorded.

3 Play the source component to be recorded and start recording it on the cassette deck.

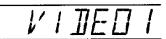
■ Listening through headphones



The input source cannot be changed over while the cassette deck connected to this unit via the system control cord is in the record mode. When it is required to change the input source, put the cassette deck in the stop mode beforehand.

Playback of videotape

1 Select the VIDEO 1 or VIDEO 2 input with the input selector.



- **2** Play the VCR.
- 3 Adjust the volume.

Operation of Dolby surround playback

Surround effect

The powerful feeling of enveloping sound experienced in places such as movie theaters is due to the fact that sound comes from not only in front but also from the periphery. To reproduce this type of feeling, this unit incorporates surround decoder. To extract the maximum surround effect, read this instruction manual thoroughly and adjust the system to match the configuration of your listening room.

Presence

Dolby PRO LOGIC Surround

Videotapes and laserdiscs which bear the DOLBY SURROUND mark are recorded with the same Dolby surround data used in movie theaters. Since this unit incorporates a Dolby PRC LOGIC surround decoder, you can enjoy the same acoustic effects experienced in movie theaters in the comfort of your own home.

Dolby 3 STEREO

With widely spaced left and right speakers, the center channe image for off-axis listeners shifts according to seating position. Dolby 3 Stereo localizes the center image regardless of seating position, improving the image over that with conventional stereo.

■ Speaker positioning

Standard layout FRONT SPEAKER FRONT SPEAKER CENTER SPEAKER REAR SPEAKER REAR SPEAKER When no rear (surround) speakers are used FRONT SPEAKER

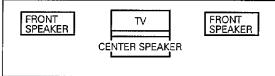
Dolby PRO LOGIC mode

Set the center mode according to the size of the center speaker:

NORMAL WIDE BAND : When the center speaker size is small.

: When the center speaker size is large or

medium.



Dolby 3 STEREO mode

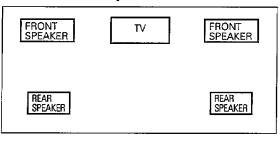
Set the center mode according to the center speaker size.

WIDE BAND

: When using a small center speaker.

: When using a medium-sized or larger center speaker.

When no center speaker is used



Dolby PRO LOGIC mode

Set the center mode to PHANTOM.

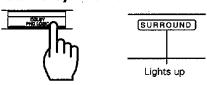
Manufactured under license from Dolby Laboratories Licensing Corporation. Additionally licensed under one or more of the following patents: U.S. numbers 3,959,590; Canadian numbers 1,004,603 and 1,037,877.

"Dolby", "Pro logic" and the double-D symbol 🔲 are trademarks of Dolby Laboratories Licensing Corporation.

Operation of Dolby PRO LOGIC playback

■ Dolby PRO LOGIC field adjustment

Set the Dolby PRO LOGIC mode.



2 Select the center mode.



Click on the CENTER MODE key with a pointed object such as a ballpoint

pen.



Every time the key is pressed, the center mode is switched.

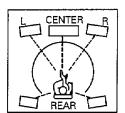
• Refer to column "Center mode" below.

3 Adjust the volume balance.

① Press the TEST TONE key.

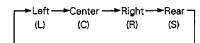
A buzzing sound comes from the speaker. It is switched every one and half second for each one.



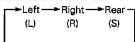


· Press at the listening position.

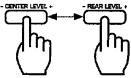
In NORMAL or WIDE BAND mode:



in PHANTOM mode:



② Adjust the volume balance.



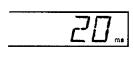
- Adjust so that the test tone volumes are the same on all speakers.
- · The level being adjusted is displayed.
- The center level cannot be adjusted in the PHANTOM mode.

4 Stop generating the test tone.

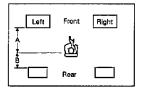


5 Set the delay time.





- Calculate the proper delay time for Dolby Surround by referring to the illustration below.
- The delay time can be adjusted in the range from 15 to 30 ms
- When the DELAY TIME key is pressed a delay time appears on the display. It varies every time the key is pressed.
 - 15 ms→ →20 ms→ →25 ms→ →30 ms
- If the DELAY TIME key is pressed all the sound will mute temporarily.
- Once a delay time is set, it is automatically held in memory so the same delay time is displayed whenever Dolby Surround is switched ON later.



Delay time (ms) = 15 ms + 5 ms (A - B)

- A: Distance of front speaker (m)
- B: Distance of rear speaker (m)

Center mode

Select one of the following center modes according to the type of the presence speakers in your system.

NORMAL : Use this mode with a center speaker of a compact size.

WIDE BAND: Use this mode with a center speaker of a medium or larger size.

 If you cannor identify whether your center speaker is of the medium or compact size, try both the NORMAL and WIDE BAND mode and use the one that can provide better sound positioning.

HANTOM: Use this mode when the center speaker is not used.

 Even without the center speaker, the signal is processed in a simulated manner to ensure proper center image positioning and provide the enjoyement of Dolby Surround.



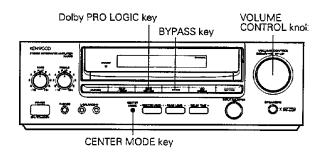
Click on the CENTER MODE key with a pointed object such as a ballpoint pen.

Every time the key is pressed, the center mode is switched.

■ Operation of Dolby PRO LOGIC playback

This function allows to enjoy a similar Dolby Surround effect to movie theaters from video software programs carrying the DDDDLBY SURROUND mark.

Before using the Dolby PRO LOGIC mode, be sure to perform the "Dolby PRO LOGIC field adjustment" procedure.



1 Set the Dolby PRO LOGIC mode.



Lights up

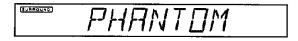
FRI LIGIL

2 Select the center mode.



Click on the CENTER MODE key with a pointed object such as a ballpoint pen.

 Select the mode which has been set in step 3 of the "Dolby PRO LOGIC field adjustment" procedure. (Refer to page 10.)

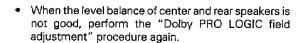


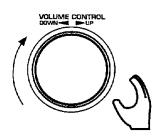
Every time the key is pressed, the center mode is switched.

NORMAL	 -PHANTOM-

3 Play a software program encoded with Dolby Surround.

4 Adjust the volume and tone.





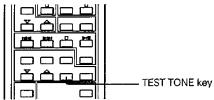
To return to normal stereo playback.

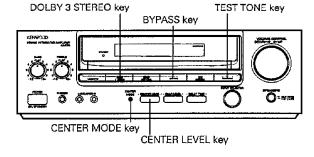




Dolby 3 STEREO Mode

The Dolby 3 STEREO provides an active center channel to produce a better, stable center image. This mode can be used when listening to stereo video program and music or when surround listening or surround system set-up is not possible.





■ Dolby 3 STEREO adjustment

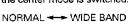
1 Set the Dolby 3 STEREO mode.





2 Select the center mode. CENTER MODE

Every time the key is pressed, the center mode is switched.





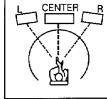
Click on the CENTER MODE key with a pointed object such as a ballpoint pen.

- Set the center mode to NORMAL if using a small center speaker, or set to WIDE BAND if using a medium-sized or larger speaker.
- 3 Adjust the center speaker volume.

1 Press the TEST TONE key.

A buzzing sound comes from the speaker. It is switched every one and half second for each other.





- Press at the listening position.
- When at 3 Stereo, sound is produced in the sequence: LEFT→CENTER→RIGHT (REAR is not available with 3 stereo mode.)
- ② Adjust the volume.



- Adjust so that the level of the center speaker is equal to that of the left and right speakers.
- The rear level adjustement is invalid.
- 4 Stop generating the test tone.

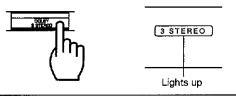
Press the key again.

 Note that the unit can not adjust the delay time.



■ Dolby 3 STEREO playback

1 Set the Dolby 3 STEREO mode.



2 Select the center mode.

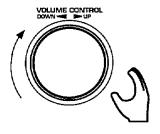
Every time the key is pressed, the center mode is switched.

NORMAL - WIDE BAND



Click on the CENTER MODE key with a pointed object such as a ballpoint pen.

- Set the center mode to NORMAL if using a small center speaker, or set to WIDE BAND if using a medium-sized or larger speaker.
- 3 Play a stereo software or a Dolby surround program.
- 4 Adjust the volume and tone.



To return to normal stereo playback.





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.

To reset the microcomputer

The microcomputer may malfunction (impossibility of any operation, erroneous display, etc) when a connection cord is unplugged or plugged while the power is ON or due to other external causes. In this case, try the method described below to reset the microcomputer and return to normal orperation.

Unplug power cord from outlet and plug it back in while holding down the POWER key.

Amplifier section, speakers

Symptom	Cause	Remedy
Sound is not output.	 The volume is set to the minimum position. The muting is set to ON. The audio cords are disconnected. 	 Adjust the volume to a proper level. Press the MUTE key to release the muting. Connect them properly.
Sound is not output from one of the speakers.	The speaker cord is disconnected. The BALANCE control is set to an extreme position.	Connect it properly referring to "System connections". Adjust the Left/Right balance.
A hum noise is generated when the PHONO input selector is selected.	The audio cord from the turntable is not inserted securely into the PHONO jacks. The turntable is not grounded.	 Insert the audio cord plugs securely into the PHONO jacks. Connect the grounding wire to the GND terminal on the rear panel.
Sound is not output from the Surround rear speaker, or Center speaker or soud is very small.	 The rear speaker cords are disconnected. The surround play mode has not been engaged. The CENTER/REAR LEVEL are set to the minimum level. 	 Connect properly referring to "System connections". Set the Dolby Surround. Adjust the CENTER/REAR LEVEL controls.

Remote control unit

Symptom	Cause	Remedy
Remote control operation is not possible.	 Batteries are exhausted. The remote control unit is too far away from the main system, controlling angle is too large, or there is an obstacle in between. The audio cords and the system control cords are not connected properly. The source component to be operated does not contain the analog disc, tape(s) or CD. An attempt is made to play a tape which is being recorded in the cassette deck. 	 Replace with new batteries. Operate the remote control unit within the controllable range. Connect properly referring to "System connections". Place an analog disc, tape(s) or CD in the source component to be played. Wait until the recording is completed.

Note:

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

For the USA and Canada For other countries **AUDIO** section AUDIO section Rated power output (FTC) Rated power output STEREO MODE **STEREO MODE** (IHF'66) From 20 Hz to 20 kHz, 0.09% T.H.D. 100 watts per channel minimum RMS, both at 8 Ω 100 W + 100 W channels driven, at 8Ω from 20 Hz to 20 kHz with (EIAJ) no more than 0.09% total harmonic distortion. 1 kHz, 10% T.H.D. at 8 Ω 150 W + 150 W **SURROUND MODE** SURROUND MODE Front 1 kHz, 0.9% T.H.D. at 8 Ω 70 watts per channel minimum RMS, both channels FRONT70 W + 70 W driven, at 8 Ω 1 kHz with no more than 0.9% total CENTER 70 W harmonic distortion. REAR20 W + 20 W Center 70 watts at 8 Ω 1 kHz with no more than 0.9% total Total harmonic distortion harmonic distortion. 0.06% (20 Hz ~ 20 kHz, 50 W, 8 Ω)0.03% (1kHz, 50 W, 8 Ω) Rear Frequency response 20 watts per channel minimum RMS, both channels LINE (CD, TAPE, VIDEO) driven, at 8 Ω 1 kHz with no more than 0.9% total20 Hz ~ 60 kHz, +0 dB, -3 dB harmonic distortion. PHONO "RIAA" response20 Hz ~ 20 kHz, ± 0.5 dB **Total harmonic distortion** Maximum input level0.06% (20 Hz ~ 20 kHz, 50 W, 8 Ω) PHONO (MM) 120 mV, 0.5% T.H.D. at 1 kHz Signal to noise ratio Frequency response (IHF'66) LINE (CD, TAPE, VIDEO) PHONO (MM)75 dB20 Hz ~ 60 kHz, +0 dB, -3 dB LINE (CD, TAPE, VIDEO)95 dB PHONO "RIAA" response Input sensitivity/impedance20 Hz ~ 20 kHz, ± 0.5 dB PHONO (MM)3.5 mV/47 kΩ Maximum input level LINE (CD, TAPE, VIDEO)200 mV/47 k Ω PHONO (MM)120 mV, 0.5% T.H.D. at 1 kHz ADAPTOR IN200 mV/47 kΩ Signal to noise ratio Tone control (IHF'66) BASS± 10 dB (at 100 Hz) PHONO (MM)75 dB TREBLE ± 10 dB (at 10 kHz) LINE (CD, TAPE, VIDEO)95 dB Loudness control (volume at -30 dB level) Input sensitivity/impedance+ 8 dB (100 Hz) Output level/impedance LINE (CD, TAPE, VIDEO)200 mV/47 k Ω TAPE REC200 mV/1 kΩ ADAPTOR IN200 mV/47 kΩ ADAPTOR OUT200 mV/1 kΩ Tone control BASS ± 10 dB (at 100 Hz) **GENERAL** TREBLE ± 10 dB (at 10 kHz) Power consumption250 W Loudness control (volume at -30 dB level) AC outlet+ 8 dB (100 Hz) SWITCHED300 W max. Output level/impedance DimensionsW: 440 mm TAPE REC200 mV/1 kΩ H: 143 mm ADAPTOR OUT200 mV/1 kΩ D: 300 mm GENERAL Power consumption2.5 A250 W SWITCHED2 (400 W max.) DimensionsW: 440 mm (17-5/16") H:143 mm (5-5/8") D: 300 mm (11-13/16") Weight (Net)9.3 kg (20.5 lb)

Note:

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

For CANADA DOC REGULATION

"This digital apparatus does not exceed the CLASS B limits for radio noise emissions from digital apparatus as set out in the rad interference regulations of the Canadian Department of Communications."

For the U. S. A. FCC WARNING:

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

NOTE:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. The equipment may cause harmful interference to radio communications, if it is not installed and used in accordance with the instructions. However, there is no guarantee that interference will not occur in a particular installation. If this equipment doc cause harmful interference to radio or television reception, which can be determined by tuning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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