

# Compact Tuner/Amplifier Series

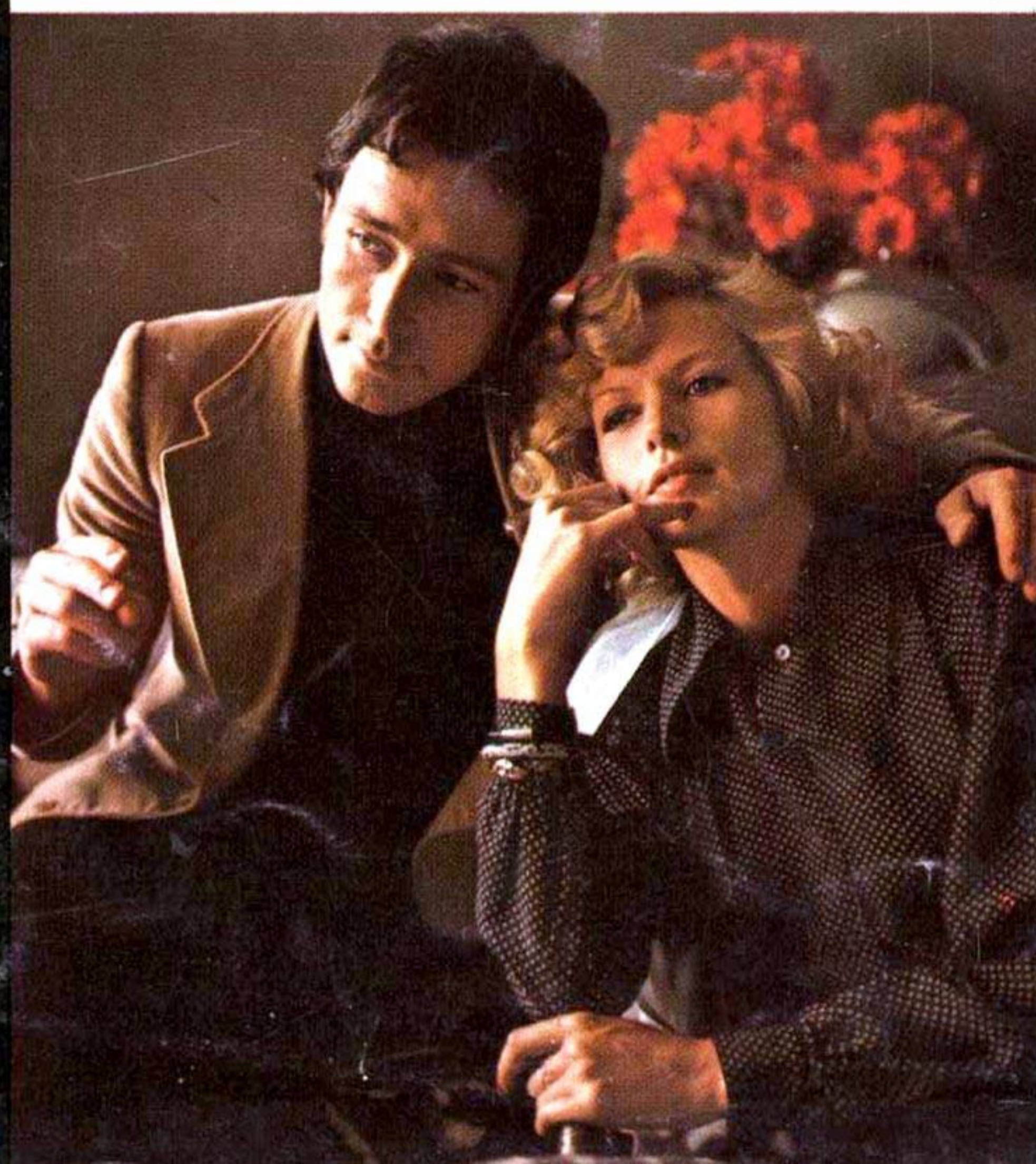
 **KENWOOD**

**KT-1300B**

**KA-1600B**

**KA-1400B**

**KA-1200B**





# Kenwood Introduces Economy To Great Stereo

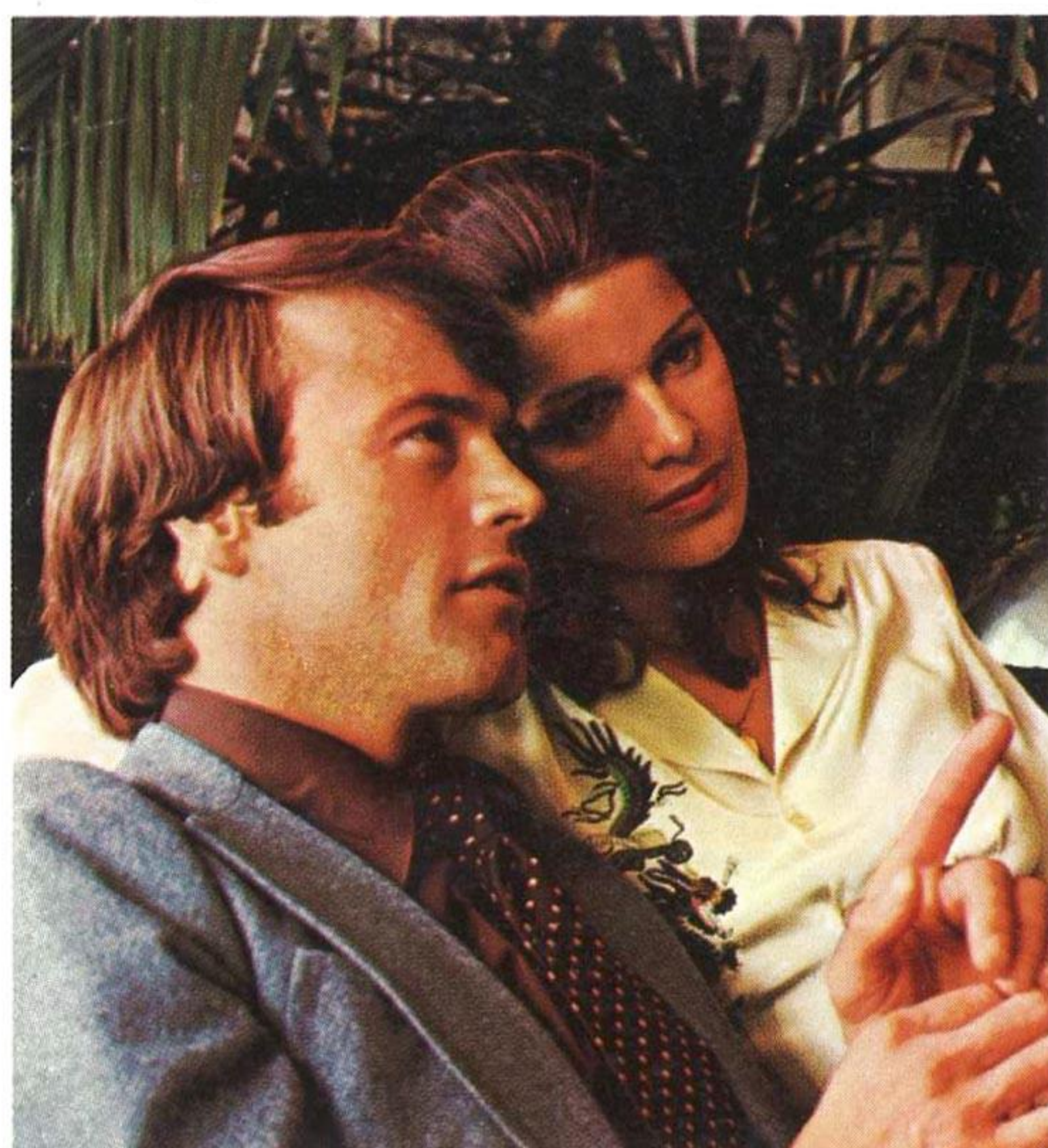
Kenwood started with the premise that music lovers want good sound—not a ticket to the poorhouse. The answer is the 1000 series. These superbly designed stereo components have a cost to performance ratio that's hard to beat. All circuits in tuner and amplifiers are eminently functional—not decorations to be seen and not used.

Reasons abound for the quality packed into these "little giants" but fundamentally they can be summarized in one word—efficiency. Kenwood laid stress on getting the most in quantity (power) and quality from each component and circuit. This efficiency begins with FM reception and continues to the speaker outputs.

KA-1600 B is one of the amplifiers in the 1000 series. With its all direct coupled and pure complementary circuit it's a powerhouse of pure listening pleasure. And it's so easy to get just the right combination you want with inputs for two tape decks, two record players and two separate sets of speaker systems. A wide choice is opened up to the proud owner of this amplifier. Dubbing from tape deck to tape deck is easy, too.

KT-1300 B is the AM/FM stereo tuner in the 1000 series. It's the crowning achievement of Kenwood's unique FM technology and uses PLL IC in the MPX circuit. The efficiency that begins in KT-1300 B goes all the way through to the amplifier output. Circuits in this tuner are the same "luxurious" type as found in top class tuners.

The 1000 series tuner and amplifiers are compact and low-in-price components with all of Kenwood's sound know-how behind them. All the basic elements for a very fine stereo system are here. Frills were eliminated and what is left is top quality performance from FM reception to power output. The external design of the 1000 series is attractive and functional. The inner circuits are crammed with efficiency and performance.



## KT-1300 B FM Tuner With Basic Efficiency Given A New Boost

1. FM sensitivity of this tuner is rated at 3.0  $\mu$ V (IHF). It has what it takes for extra clear and sharp reception even of weak stations. Weak signals are pulled in and boosted so the music you finally hear is of the best quality.

2. MOS type FET (field effect transistor) is used in the front-end of KT-1300 B. This works to reduce interference of all kinds—spurious noises or signals on other nearby frequencies. Signals, powerful or weak, get the same treatment thanks of the MOS type FET.

3. The linear dial scale lights up for easy reading and ranges from 88 MHz to 108 MHz. It uses a direct coupled variable condenser to cover the whole range of FM frequencies.

4. The extra reliable IF stages use ceramic ICs. These stages provide the gain that is required and help reduce distortion. The ceramic ICs do their part for a broad bandwidth as well as for reducing interference.

5. The superior PLL IC is used which shows outstanding characteristics for better separation in the MPX circuit. It also helps to reduce distortion to an absolute minimum.

6. KT-1300 B has a built-in MPX Noise Filter which cuts out the higher noises that are so annoying. These can come from a weak signal and other causes. The noise filter does not affect the high frequency range.



KT-1300 B

## SPECIFICATIONS KT-1300

<b>FM TUNER SECTION</b>	
Frequency range	88 MHz ~ 108 MHz 87.5 MHz ~ 108 MHz (FTZ approved)
Usable Sensitivity (IHF)	3.0 $\mu$ V
Quieting Slope	5.0 $\mu$ V 50 dB, 10 $\mu$ V 56 dB, 50 $\mu$ V 58 dB
Frequency Response	50 Hz ~ 13,000 Hz $\pm$ 3 dB
Harmonic Distortion	0.8 % Mono (at 400 Hz 100 % modulation) 1.0 % Stereo (at 400 Hz 100 % modulation)
Signal to Noise Ratio	60 dB at 1 mV input
Image Rejection	40 dB
Selectivity (IHF ALT channel)	41 dB
IF Rejection	80 dB
Spurious Signal Rejection	80 dB
AM Suppression	50 dB
Capture Ratio	3.0 dB
Stereo Separation	30 dB at 1,000 Hz 30 dB at 10,000 Hz
Sub Carrier Suppression	45 dB
Antenna Impedance	300 ohms balanced & 75 ohms unbalanced
<b>AM TUNER SECTION</b>	
Usable Sensitivity (IHF)	20 $\mu$ V
Signal To Noise Ratio	40 dB at 1 mV input
Image Rejection	45 dB
Selectivity (IHF)	26 dB
IF Rejection	35 dB
Antenna	Built-in ferrite bar antenna, External antenna terminals
<b>OUTPUT VOLTAGE</b>	
FM (at 400 Hz 100 % modulation)	1.0 V, 2 k ohms
AM (at 400 Hz 30 % modulation)	150 mV, 2 k ohms
<b>GENERAL</b>	
Switches	AM-FM, MONO-STEREO MPX NOISE FILTER, POWER Tuning Knob, FM STEREO Indicator
Others	10 Watts
Power Consumption	W 14-5/8" (372 mm), H 4-15/16" (125 mm), D 9-7/8" (251.5 mm)
Dimensions	
Weight	7.66 lbs. (3.5 kg)

We reserve the right to make modifications in accordance with technical developments.

## KA-1600 B Versatility To Match Top Amplifier Quality

1. Power to spare with 23 W + 23 W (RMS) output into 8  $\Omega$  KA-1600 B easily and adequately covers the whole range from 50 ~ 20,000 Hz. Distortion is reduced to an absolute minimum.

2. Direct coupled pure complementary circuit is designed for maximum output performance. Another example of use of high efficiency. Feeding the signal directly to the speakers means better use of power and at the same time less distortion.

3. KA-1600 B uses a constant-current circuit in the emitter of the differential amplifier. This special design reduces the usual shock noise when the power of the amplifier is turned on or off. An instance of Kenwood's policy of efficiently reducing noise even if it's only momentary.

4. The preamplifier section benefits from a two stage direct coupled low noise equalizer circuit. Distortion is prevented in these two stages—it isn't amplified in the main amplifier. RIAA deflection is low and signal to noise ratio is high.

5. The versatility of this amplifier is increased with its connectors for two tape decks. This feature adds to its convenience and usefulness. A cassette deck and open reel deck can both be connected. There is no need to be bothered by continuous changes. Dubbing is possible from tape deck A to tape deck B.

6. Two separate speaker systems can be directly connected to the amplifier output. The two systems can be operated simultaneously or separately. It's simple to have music in two room without the added expense of having two stereo systems.

7. The click stop tone controls are easy to operate to get just the right tone that you like best. There are separate controls for bass and treble. Also a defeat switch.

8. The loudness switch increases those sections of the audible range that are difficult to hear when music is played at low volume. Hi/low filters give you the option of cutting or not cutting out the extremes of the listening frequencies.

9. KA-1600 B has a special microphone input. Recording on your own is simplified. (Mic mixing is not possible.)



KA-1600 B

KA-1400 B

## KA-1400 B Distortion Reduced To Its Lowest Limits

1. With both channels driven (1 kHz) into 8  $\Omega$  KA-1400 B has a rated output of 17 W + 17 W. Adequately covers a range from 50 ~ 20,000 Hz—well beyond the usual limits of the most ardent high fidelity enthusiasts. Feeds perfectly into any 8  $\Omega$  speaker system with no complications at all.

2. Semi-complementary OTL (Output Transformerless) circuit assures that maximum power will reach the speaker terminals. There is no loss in transformers that modern technology have made unnecessary. Distortion is kept down until it is almost non-existent and efficiency is increased to its maximum limits.

3. The two stage direct-coupled low noise equalizer circuit functions efficiently in the preamplifier section. Distortion is eliminated here and not passed on to the speakers where it is turned into audible sound. These two stages have a lot to do with low RIAA deflection and high signal to noise ratio.

4. Full protection is supplied by the electronic protection circuit.

5. Two tape decks can be directly connected to this amplifier. Dubbing from tape deck A to tape deck B is also possible. This feature is particularly convenient if you want to change from a cassette tape deck to an open reel deck and back again frequently.

6. Two separate speaker systems can be connected to KA-1400 B. They can be used at the same time or separately. Settings are for Off (if you want to use headphones), A speaker system, B speaker system or A + B, when both systems are to be used simultaneously. Two record players can also be connected to KA-1400 B.

7. The tone controls permit adjustment of music tone to fit individual taste. One control is for bass and the other for treble. Settings range from +10 to -10. There is also a defeat switch.

8. The high filter switch is incorporated into this amplifier to get rid of the extreme highs which sometimes consist only of a lot of annoying hiss. The high filter will cut these out. The loudness switch is used when listening to music at low volume.

## KA-1200 B

- Power Output (RMS) 13  $\times$  2 W
- Semi-Complementary OCL Power Amp
- Bass, Treble Tone Controls
- 2 sets of Speaker Systems connectable
- Input Selector, Tuner, Phono, AUX, MIC
- Tape Monitor, Loudness Switch



KA-1200 B



## SPECIFICATIONS

### KA-1600

### KA-1400

### KA-1200

RMS Power Output Both channels driven	20 watts x 2 into 8 ohms at 40 Hz – 20,000 Hz 23 watts x 2 into 8 ohms at 1,000 Hz 28 watts x 2 into 4 ohms at 1,000 Hz	15 watts x 2 into 8 ohms at 50 Hz – 20,000 Hz 17 watts x 2 into 8 ohms at 1,000 Hz 20 watts x 2 into 4 ohms at 1,000 Hz	— 13 watts x 2 into 8 ohms at 1,000 Hz 16 watts x 2 into 4 ohms at 1,000 Hz
Dynamic Power Output	80 watts into 8 ohms 100 watts into 4 ohms	54 watts into 8 ohms 68 watts into 4 ohms	42 watts into 8 ohms 58 watts into 4 ohms
Total Harmonic Distortion	0.8 % at rated power into 8 ohms 0.1 % at 1/2 rated power into 8 ohms at 1,000 Hz	0.8 % at rated power into 8 ohms 0.1 % at 1/2 rated power into 8 ohms at 1,000 Hz	0.8 % at rated power into 8 ohms 0.1 % at 1/2 rated power into 8 ohms at 1,000 Hz
Inter Modulation Distortion (60 Hz: 7 KHz = 4 : 1)	0.8 % at rated power into 8 ohms 0.1 % at 1/2 rated power into 8 ohms at 1,000 Hz	0.8 % at rated power into 8 ohms 0.1 % at 1/2 rated power into 8 ohms	0.8 % at rated power into 8 ohms 0.1 % at 1/2 rated power into 8 ohms
Power Bandwidth	20 Hz – 40 KHz	20 Hz – 40,000 Hz	20 Hz – 40,000 Hz
Signal to Noise Ratio at 50 mW	50 dB	50 dB	50 dB
Damping Factor	30 at 8 ohms	30 at 8 ohms	30 at 8 ohms
Speaker Impedance	4 to 16 ohms	4 to 16 ohms	4 to 16 ohms

## PRE-AMPLIFIER SECTION

### Input Sensitivity and Impedance

Phono 1	2.5 mV, 50 k ohms	2.5 mV, 50 k ohms	2.5 mV, 50 k ohms
Phono 2	2.5 mV, 50 k ohms	2.5 mV, 50 k ohms	—
Tuner	150 mV, 50 k ohms	150 mV, 50 k ohms	150 mV, 50 k ohms
AUX	150 mV, 50 k ohms	150 mV, 50 k ohms	150 mV, 50 k ohms
Tape Play	150 mV, 50 k ohms	150 mV, 50 k ohms	150 mV, 50 k ohms
Mic	3.0 mV, 50 k ohms	3.0 mV, 50 k ohms	3.0 mV, 50 k ohms

### Maximum Input Voltage (rms)

Phono	85 mV, T. H. D. 0.8 % at 1,000 Hz	80 mV, T. H. D. 0.8 % at 1,000 Hz	80 mV, T. H. D. 0.8 % at 1,000 Hz
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### Signal to noise Ratio (I. H. F. A CURVE)

Phono	68 dB	68 dB	68 dB
Tuner	80 dB	80 dB	80 dB
AUX	80 dB	80 dB	80 dB
Tape Play	80 dB	80 dB	80 dB
Mic	68 dB	68 dB	68 dB

### Output Voltage and Impedance

Tape Rec. (Pin)	150 mV, 110 ohms	150 mV, 110 ohms	150 mV, 110 ohms
(Din connector)	30 mV, 80 k ohms	30 mV, 80 k ohms	30 mV, 80 k ohms

### Frequency Response

Phono	RIAA Standard curve $\pm 1.0$ dB	RIAA Standard curve $\pm 1.0$ dB	RIAA Standard curve $\pm 1.0$ dB
Tuner, AUX, Tape Play	20 Hz – 40 KHz + 0, – 2 dB	20 Hz – 40,000 Hz + 0, – 2 dB	20 Hz – 40,000 Hz + 0, – 2 dB

### Tone Controls

Bass	$\pm 10$ dB at 100 Hz	$\pm 10$ dB at 100 Hz	$\pm 10$ dB at 100 Hz
Treble	$\pm 10$ dB at 10,000 Hz	$\pm 10$ dB at 10,000 Hz	$\pm 10$ dB at 10,000 Hz
Loudness Control (– 30 dB)	+ 8 dB at 100 Hz + 5 dB at 10,000 Hz	+ 8 dB at 100 Hz + 5 dB at 10,000 Hz	+ 8 dB at 100 Hz + 5 dB at 10,000 Hz
Low Filter 100 Hz	– 8 dB	–	–
High Filter 10 KHz	– 8 dB	– 8 dB	–

## GENERAL

### Switches

Speaker Selector	OFF, A, B, A+B	OFF, A, B, A+B	OFF, A, B
Input Selector	AUX, TUNER, PHONO 1, PHONO 2, MIC	AUX, TUNER, PHONO 1, PHONO 2, MIC	AUX, TUNER, PHONO MIC
Mode	STEREO, MONO	STEREO, MONO	STEREO, MONO
Tape Monitor	A, B	A, B	SOURCE, PLAY
Others	HIGH FILTER, LOW FILTER, LOUDNESS, TONE DEFEAT	HIGH FILTER, LOUDNESS, TONE DEFEAT	LOUDNESS

### AC Outlet

Switched 1, Unswitched 1	Switched 1, Unswitched 1	Switched 1, Unswitched 1	Unswitched 1
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### Power Consumption

160 watts at full power	135 watts at full power	120 watts at full power	120 watts at full power
19.5 watts at no signal	10 watts at no signal	9 watts at no signal	9 watts at no signal

Dimension	W 14-5/8" (372 mm), H 4-15/16" (125 mm), D 9-7/8" (251.5 mm)	W 14-5/8" (372 mm), H 4-15/16" (125 mm), D 9-7/8" (251.5 mm)	W 14-5/8" (372 mm), H 4-15/16" (125 mm), D 9-7/8" (251.5 mm)
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Weight	12.7 lbs (5.8 kg)	11.6 lbs (5.3 kg)	10.8 lbs (4.9 kg)
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