KENWOOD

BASIC C1

CONTROL AMPLIFIER

BASIC M1

STEREO POWER AMPLIFIER

KENWOOD STEREO CONTROL AMPLIFIER MODEL BASIC C1

POWER ON OFF

FLAT BASS

FLAT TREBLE

CENTER L BALANCE

OFF LOUDNESS

SUBSONIC FILTER ON OFF

TAPE (A)

TAPE (B)

DUBBING (A ▸ B)

AUX

TUNER

PHONO (MM)

PHONO (MC)

VOLUME CONTROL

KENWOOD STEREO POWER AMPLIFIER MODEL BASIC M1 DRIVE

POWER ON OFF

PHONES

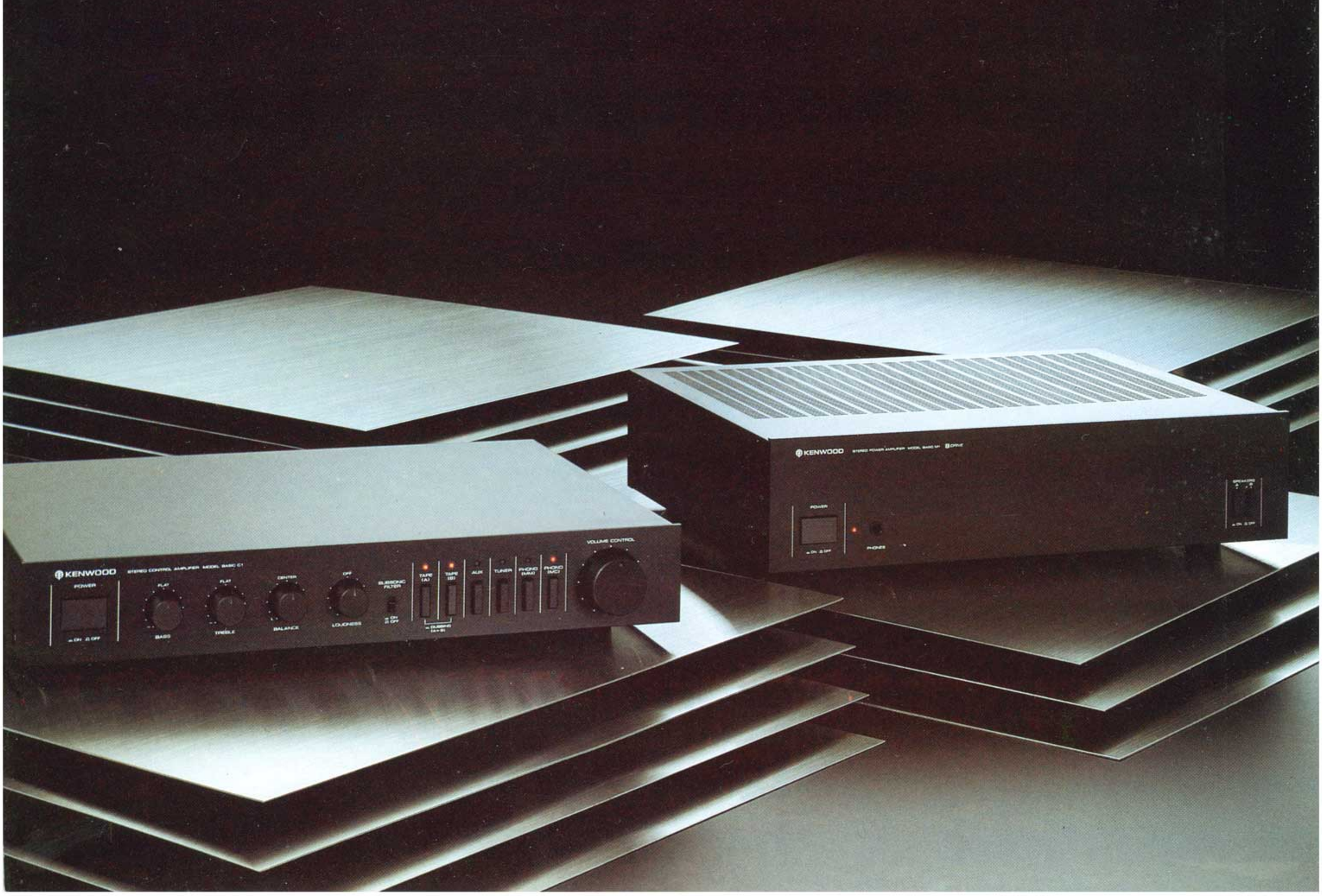
SPEAKERS A B ON OFF

Here at last is a separate control/power amplifier that puts dynamic headroom and superb tonal quality sensibly within reach of everyone.

Kenwood has designed a new stereo amplifier that proves, once and for all, that quality components need not be beyond the reach of the budget-minded audiophile. Now, with these two superbly engineered BASIC components, the idea can become reality.

The BASIC design priorities are definitely in the right order. And the model's audio tasks are accomplished with the help of some exciting new technology. For example, the BASIC M1 incorporates new, Kenwood-developed Dynamic Linear Drive circuitry that gives it incredible power handling capability and yet maintains ultra-low distortion through the audible band. It can provide enormous dynamic headroom and can reproduce authentically the best quality music sources available. And yet, unlike the conventional high-power amplifier, it also offers superb tonal quality, even at low signal levels.

To anyone accustomed to the escalating price/performance ratio, it will be hard to believe that this level of performance can be available at such a moderate cost.



BASIC M1

STEREO POWER AMPLIFIER

ΣDRIVE NEW HI-SPEED

Unprecedented dynamic headroom, vanishing distortion and precision control of speaker-cone excursion. These are some of the rewards of the new technology to be found in the BASIC M1.

Dynamic Linear Drive

A startlingly simple design concept translates into a much sought-after goal of higher power handling ability combined with low distortion and outstanding tonal quality. A patented Kenwood technology*, the DLD power circuit brings together the best features of a top-quality medium-power amplifier and a high-power amplifier, totally sidetracking their disadvantages. Thus, you can get the enormous power needed to amplify the most dynamic music signal peaks. Simultaneously, you can hear the kind of smooth, evenly-balanced tonal quality extending throughout the audible range you would normally expect only from a first-rate medium-power amplifier. There are no size, weight, heat or thermal instability problems. THD and IM distortion are at vanishing point even at lower signal levels. Dynamic peaks are handled easily and are so clearly perceptible they will satisfy the most hypercritical listener. *US Patent 4158179

Unprecedented dynamic headroom for natural reproduction

Highly reactive speaker loads and crest-value music signals that exceed rated output are taken fully in stride by the BASIC M1. This amplifier can comfortably handle the highest dynamic peaks, even at rated listening levels, and can operate fully with speaker impedances that fall as low as 2 ohms. Look at the data for Dynamic Headroom and you'll see dynamic margins as wide as 2.8dB into 4-ohm loads and 2.1dB into 8-ohm loads.

Sigma Drive controls speaker back-emf

Spurious voltages caused by over-reactive speaker cones (back-emf) are now controlled at long distance by the amplifier through an extended NFB loop.

Hi-Speed provides accurate amplifier response

Hi-Speed is an amplifier circuit technique developed to reduce transient intermodulation distortion. Although TIM has its origins far above the human hearing threshold, it creates a fallout of byproducts that intermodulate with frequencies falling within the audible range. It causes loss of intelligibility and musical detailing, especially during the reproduction of transient signals. Even though there is plenty of evidence both with pulsed square wave and sine wave response oscillographs and in listening tests, TIM is a distortion problem that is still not fully understood even by critics. TIM can only be eliminated through fast, symmetrical rise and fall times and a high slew rate. Hi-Speed design provides this. It gives the BASIC M1 the ability to respond fully to the most rapid voltage changes dictated by the music signal.

Wide frequency response

BASIC M1 is designed for a frequency response accurate to within −3dB from 1Hz to 300kHz, ensuring that all signals falling within the audible range are reproduced perfectly.

Low distortion

Typical mid-band THD and IM distortion values at rated power into 8 ohms average a vanishing 0.001%, beyond which point values are unmeasurable and meaningless. Across the 20Hz to 20kHz audible bandwidth, THD measures no more than 0.005%.

Zero crossover and switching distortion through advanced Hi-Speed design

Two speaker system selectors

Front panel headphone jack

Thermal circuit breaker provisions

BASIC M1 provides rated dynamic headroom in accordance with EIA Interim Standard CPIS-2. However, operation during test procedures at continuous RMS ratings exceeding 10 minutes will trip the thermal circuit protector. Reset is automatic when operating temperatures drop to normal.

BASIC C1

CONTROL AMPLIFIER

A full-control unit, BASIC C1 is fully up to the high standards set by its partner, BASIC M1. It contributes clarity, smoothness and the ability to process the most varied and dynamic program material with accuracy.

Front panel MM and MC phono cartridge selection

Now that high-quality MC cartridges are becoming more affordable, the freedom to select a cartridge to suit the needs of the music is an important advantage in a preamplifier. BASIC C1 adjusts to the preferred cartridge automatically, according to the input selector that is activated. This system is realized through a new high-gain, high-stability phono equalizer amplifier that has a dual-input function. Its input stage employs two high-gain FET's while the output is a new low-noise IC. By changing the negative feedback value and impedance automatically, this new equalizer amplifier allows cartridge selection without any reconnecting inconvenience. In addition, optimum noise and distortion ratings are maintained for both types of cartridge.

Outstanding reproduction quality from records

Many preamplifier designs are disappointing when it comes to actual listening tests, in spite of apparently good performance data. But the BASIC C1 preamplifier is one model that will shine out in any such test. S/N ratios and RIAA accuracy are, of course, excellent. But it is the ability of the BASIC C1 to process signals transparently and smoothly, without any trace of harshness or coloration, that makes it outstanding. It can provide a wealth of musical fine-detail especially in the very high frequency range, which is often a disaster zone for preamplifiers. Yet it can handle highly complex and "heavy" dynamic music cleanly, too.

Low-distortion tone circuit

With a super-low-noise buffer amplifier to feed it, the tone control circuit is a negative-feedback capacitor-resistor type that produces no gain and provides excellent tonal quality and low distortion. At the center detent position, totally flat response is obtained.

Continuously adjustable loudness control

At a point 30dB below maximum volume level, a 100Hz signal can be boosted from zero dB to 9dB for fine tonal balancing when listening at average to low volume levels.

Subsonic filter

With response reaching down to 1Hz, subsonic influences such as record warp signals could cause listening problems. To eliminate them there is a subsonic filter which rolls off response below 18Hz at a rate of 6dB per octave.

On/Off muting relay

To prevent shock noise when the control amplifier is turned on or off, a relay circuit at the output releases the signal only after all circuits are stabilized.

A full range of controls

BASIC C1 is equipped with every control that you will need for the maximum enjoyment of every music source. There are two tape inputs (with independent circuits for each) and two tape monitors. Dubbing is accomplished from Tape A to Tape B. Aux and Tuner selectors and Phono MM and MC cartridge selectors, as well as Tape selectors, each have an LED indicator above them.

Design simplicity is best

As you can see, the control panel of the BASIC C1 is simplicity itself, reflecting the clear thinking that exists at Kenwood about what control amplifier priorities really are. The panel is laid out for easy use. And inside, the same philosophy of "simpler the better" holds for the circuitry.

The leading edge in amplifier technology

Dynamic Linear Driven: an amplifier with the ability to reproduce greater transient signals for natural sound

The new digital music sources with their much wider dynamic ranges now make high power handling an essential amplifier requirement. But there are problems with the conventional Class A type high-power amplifier, which is inefficient and produces unnecessary heat. Since it delivers full power constantly, its design concept often concentrates on the minimization of breakdowns and damage. Moreover, although it has rich bass when operating at high levels, it tends to a harsh sound when operating at low amplitude levels.

A low-power amplifier has better tonal quality at low sound levels. However, it fails to correctly reproduce transient peaks, especially from the new digital audio recording systems. Kenwood's new patented Dynamic Linear Drive circuit augments the merits of both types of amplifier. It is a unique technology that provides enormous amounts of power when needed, but simultaneously provides the superb tonal quality normally expected only from a top-quality medium-power amplifier.

How Dynamic Linear Drive operates

Transient music peaks actually occupy only a tiny fraction (some 10% at most) of an amplifier's time. Ideally, therefore, amplifier operation should divide into two: one amplifier for normal use, another for those dynamic emergencies. Kenwood's Dynamic Linear Drive is the successful achievement of this ideal.

DLD is a predriver circuit that keeps the signal under instantaneous surveillance using state-of-technology semiconductors. This processing circuit employs a peak level analyzer and frequency discriminator to appraise signals according to their dynamic and frequency structure. The signal, or part of it, is then sent to either a medium-power amplifier or a high-power amplifier as appropriate. Each amplifier is activated solely according to signal needs. Each has its own line of communication to the power supply. Each maintains extremely low distortion levels over the full audio bandwidth.

DLD allows instantaneous high-energy, low-frequency signals (those that demand the greatest power) to be amplified easily within a very large margin of dynamic headroom. Since this amplifier operates only instantaneously, it remains relatively cool-running. Average-level signals are amplified independently. Therefore, at low output levels, there is no tendency to produce the harsh "grainy" sound which is the failing characteristic of the high-power amplifier operating below capacity. DLD gives the audiophile the best of both amplifier worlds.

Dynamic Headroom

The word "headroom" aptly describes how output level can jump momentarily before hitting the ceiling. Dynamic Headroom is therefore a measure of the extra reserve an amplifier can deliver according to the transient dictates of the actual music signal. For the new digital music sources, ample dynamic headroom is critical to their natural reproduction. BASIC M1 is built to handle the highest dynamic crest-value signals even exceeding rated output.

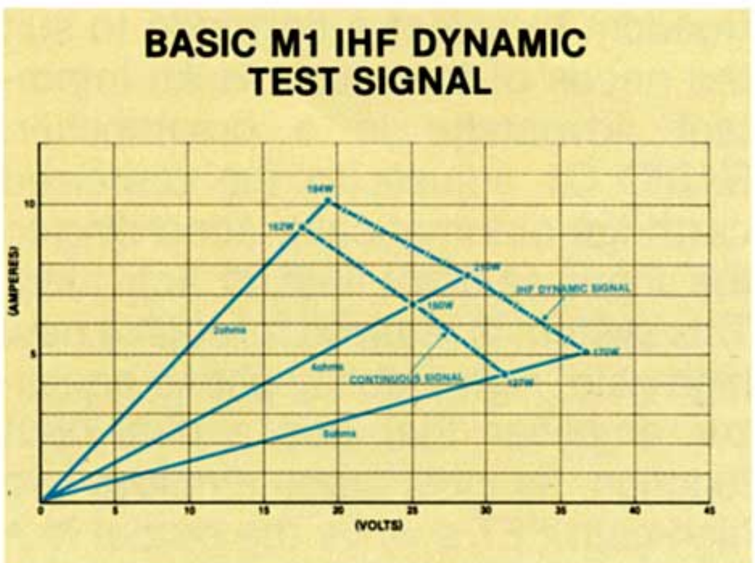
Sigma Drive for superb speaker control

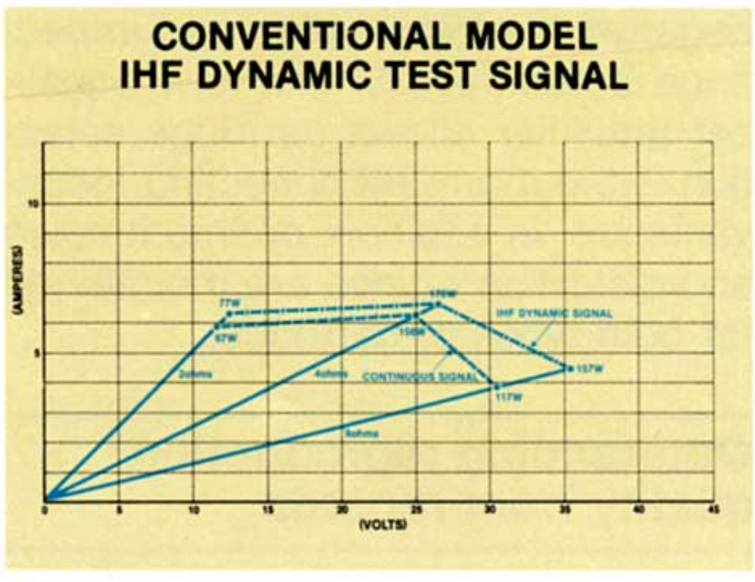
Speaker cones tend to overreact to signals with a heavy low-frequency, high-energy content, generating spurious voltages that are fed back to the amplifier via the speaker cords. With Sigma Drive, Kenwood engineers have extended the amplifier negative-feedback loop (used to reduce distortion) right up to the speaker input terminals. Damping Factor, as compared with normal values, is extraordinary: 1,000 at 100Hz.

Front panel MM/MC cartridge selection and new, dual-function phono equalizer amplifier

Audiophiles often choose the MC cartridge because of its ability to transduce music signals with great clarity and delicacy. The more popular MM cartridge, on the other hand, is often preferred for some types of "heavy" music that require an overall tonal spread and presence. The good news for music lovers today is that it is now much easier to choose a cartridge suited to the type of music to be played. The BASIC C1 control is fully prepared for this with a front panel MM/MC cartridge selector that allows the operator to change freely from one to the other.

The phono equalizer amplifier is a new high-gain, ultra-stable design that accepts both inputs automatically, by changing negative-feedback and impedance. For both types of cartridge, noise levels are kept very low.





NOTE: *BASIC M1 provides rated dynamic headroom to handle music signals in accordance with EIA interim standard CPIS-2. However, operation at continuous rms ratings during test procedures that exceed 10 minutes will trip the thermal circuit protector. Reset is automatic when operating temperatures drop to normal.*

SPECIFICATIONS

BASIC C1

PERFORMANCE

Input Sensitivity/Impedance/Signal to Noise Ratio (IHF A Curve)
- Phono 1 (for MM use) ..... 2.5 mV/ 47k ohms/87 dB
- Phono 2 (for MC use) ..... 0.25 mV/ 100 ohms/ 70 dB
- Tuner/AUX ..... 150 mV/ 47k ohms/ 108 dB
- Tape Play ..... 150 mV/ 47k ohms/ 108 dB

Maximum Input Voltage for Phono 1 — 200 mV (RMS), T.H.D. 0.005% at 1kHz
Maximum Input Voltage for Phono 2 — 15 mV (RMS), T.H.D. 0.005% at 1 kHz
Frequency Response — RIAA Standard Curve
- Phono 1 & 2 ..... ±0.3 dB (30Hz — 20 kHz)
- Tuner, AUX & Tape Play ..... 1 Hz — 250 kHz (−3 dB)

Subsonic Filter ..... 18 Hz, 6 dB/oct.
Transient Response
- Rise Time 1.4μS

Total Harmonic Distortion
- Tuner, AUX & Tape Play
- 20 Hz — 20 kHz ..... 0.004% at 1V Output
- Phono 1 (for MM use)
- 20 Hz — 20 kHz ..... 0.005% at 1V Output (VOLUME at −30 dB)
- Phono 2 (for MC use)
- 20 Hz — 20 kHz ..... 0.005% at 1V Output (VOLUME at −30 dB)

Output Voltage & Impedance ..... 1V/ less than 600 ohms
- Maximum Output 5V

Load Impedance ..... 47k ohms
Loudness Control
- (at VOLUME −30 dB) ..... 0 to +9 dB at 100 Hz Continuously Variable

GENERAL

Power Requirement ..... 60 Hz, 120V (U.S.A. & Canada model)
Model sold elsewhere incorporates switch to accommodate 50/60 Hz, 110-120V/220-240V
Power Consumption ..... 0.15 A
AC Outlet ..... 1 unswitched 2 switched
Dimensions (W × H × D) ..... 17-5/16″ × 3-5/64″ × 12-27/32″ (440 × 78 × 326 mm)
Weight (Net) ..... 9.3 lbs. (4.2 kg)
(Gross) ..... 10.6 lbs. (4.8 kg)

BASIC M1

PERFORMANCE

105 Watts per channel minimum RMS, both channels driven at 8 ohms from 20 Hz to 20 kHz with no more than 0.005% total harmonic distortion.

Continuous Power ..... (110 watts 8 ohms at 1 kHz)
(110 watts 4 ohms at 1 kHz)

	at 8 ohms	at 4 ohms
Clipping Power	127 W/ch (1 kHz)	160 W/ch (1 kHz)
Clipping Headroom	0.8 dB	1.6 dB
Dynamic Power	170 W/ch (1 kHz)	210 W/ch (1 kHz)
Dynamic Headroom	2.1 dB	2.8 dB

Total Harmonic Distortion (20 Hz — 20 kHz) ..... 0.005% at rated power output into 8 ohms
0.005% at 1/2 rated power into 8 ohms
0.001% at rated power into 8 ohms at 1 kHz
Intermodulation Distortion (60 Hz:7 kHz = 4:1) ..... 0.005% at rated power into 8 ohms
0.005% at 1 watts into 8 ohms
Transient Response
- Rise Time ..... 1.2 μS
- Slew Rate ..... ±100V/μsec.

Frequency Response ..... 1 Hz — 300 kHz, −3.0 dB
Signal to Noise Ratio (IHF-A Curve) ..... 120 dB
Damping Factor ..... More than 1,000 at 100 Hz
Input Sensitivity/Impedacne ..... 1V/ 47k ohms
Speaker Impedance ..... Accept 4 ohms at 16 ohms

GENERAL

Power Requirement ..... 60 Hz, 120V (U.S.A. & Canada model)
Model sold elsewhere incorporates switch to accommodate 50/60 Hz, 110-120V/ 220-240V
Power Consumption ..... 2.0 A
AC Outlet ..... 1 unswitched , 2 switched
Dimensions (W × H × D) ..... 17-5/16″ × 4-27/64″ × 12-49/64″ (440 × 112 × 324 mm)
Weight (Net) ..... 20.1 lbs. (9.1 kg)
(Gross) ..... 21.8 lbs. (9.9 kg)

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

A product of
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