

YAMAHA C-2

High performance stereo preamplifier.

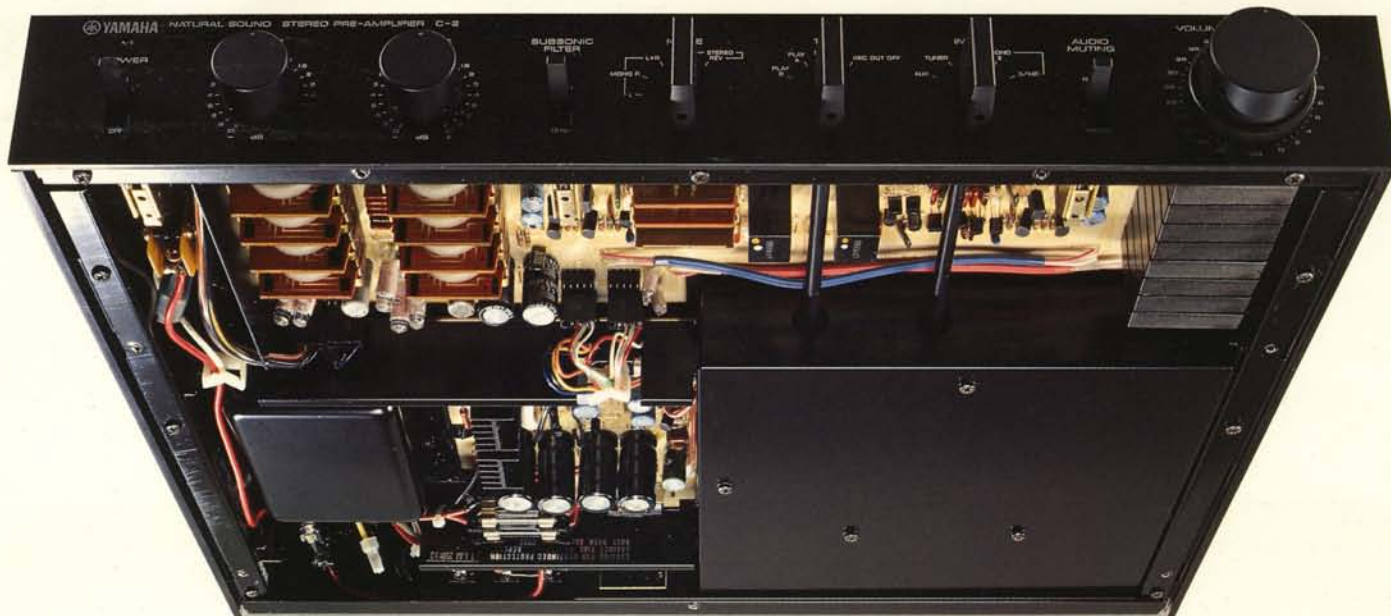
Exclusive Yamaha paired FETs.

Full 99 dB signal-to-noise ratio for 10 mV MM inputs.

MC head amp giving 70 dB S/N (0.05 mV).

No more than 0.003% distortion 20 Hz to 20 kHz.



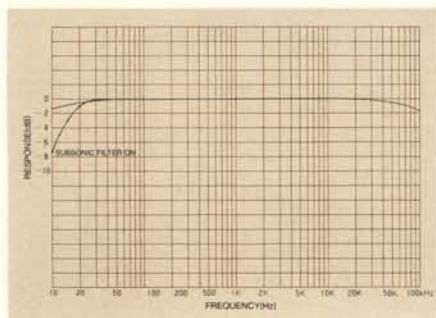


THE ULTIMATE IN SOPHISTICATED SIMPLICITY THE C-2

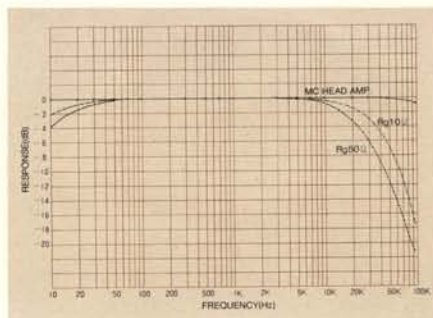
The C-2 is everything that a preamplifier should be, and nothing more. Honed down to the ultimate in simplicity, it has the technical sophistication to set new standards in audio reproduction. The clean-cut lines and the unmistakable sense of precision in switches and knobs are mirrored by the clear purity of the sound. With ultra low noise and distortion levels, the original sound is re-created in all its beauty: each delicate nuance, every shattering climax.

Logically arranged controls provide the full range of switching options — tape monitoring, subsonic filter, audio muting, etc. — and precisely calibrated tone compensation down to fine, 0.5 dB steps. There is even a threefold choice of phono inputs, with an MC head amplifier which provides a signal-to-noise ratio for 0.05 mV input (70 dB) as good as many amplifiers give for standard MM inputs. It is a combination of simplicity and sophistication to delight both eyes and ears.

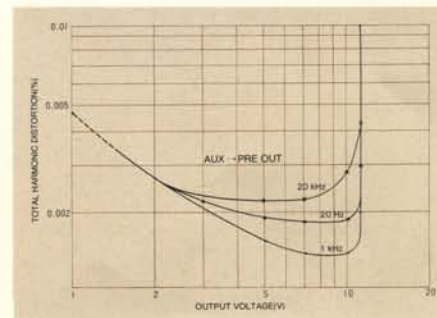
C-2 FREQUENCY RESPONSE:
AUX → PRE OUT

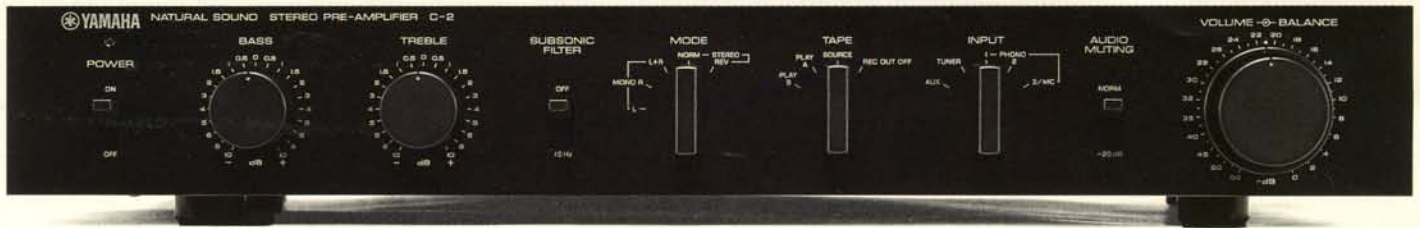


FREQUENCY RESPONSE FOR C-2 MC
HEAD AMP AND STEP-UP TRANSFORMER



OUTPUT VOLTAGE VS. TOTAL HARMONIC
DISTORTION



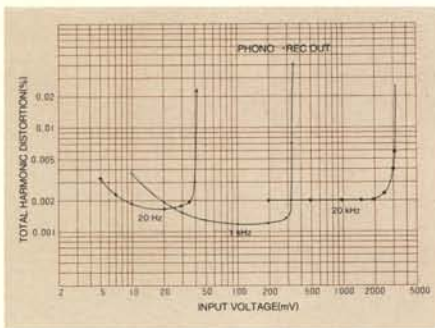


Advanced Phono Equalizer Amplifier

The equalizer is the heart of any pre-amplifier, deciding the quality of record reproduction. The C-2 equalizer amplifier uses a unique combination of ultra low noise Yamaha FETs in matched pairs with the very latest circuitry to give performance which is outstanding by any standards. The FETs enable a gain of 10 dB in S/N (85 dB for 2 mV input) over conventional elements, and the circuitry gives new lows in total harmonic distortion, virtually independent of varying source impedances, thanks to the cascode-bootstrap current mirror differential amplifier first stage, Darlington-connected constant-current load common-emitter amplification, and fully complementary parallel push-pull class A output stage. And with optimum NFB applied, it gives 0.003% distortion, so that you get what was on the disc. Nothing added. Nothing taken away.

Departure from the RIAA playback curve is within ± 0.2 dB, due to the use of high precision polystyrol film capacitors and metal film resistors, for utmost fidelity.

WIDE DYNAMIC MARGIN PHONO INPUT EQUALIZER

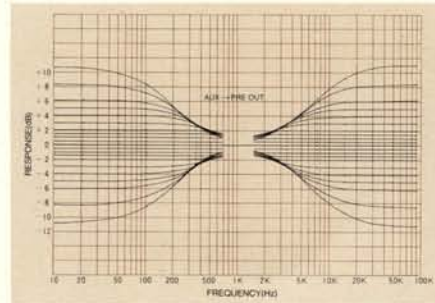


Dynamic margin at 1 kHz is 300 mV for 2-mV rated input, enough to cope

comfortably with the latest recordings and the widest dynamic range, for increased realism.

Flexible and Precise Tone Controls

tone control characteristics



With turnover frequencies carefully chosen for optimum effectiveness in use, both bass and treble controls are high precision attenuator types. There are 20 steps for each control (21 positions), in 0.5-dB steps to ± 2 dB, then by 1 dB at a time to ± 6 dB, then by 2 dB to ± 10 dB at 50 Hz and 20 kHz respectively. The central (zero) position is a complete 'tone defeat' setting, at which the signal completely bypasses the tone-control circuit, so that the C-2 acts as a flat amplifier, eliminating the last traces of tone-control generated distortion. The ± 0.5 -dB steps provide delicate control of RIAA response characteristics, giving subtle emphasis to match individual cartridge performance. Complementary circuit configuration and class A push-pull output from the tone amplifier give the true, pure sound that is clear proof of extremely low distortion, from low volumes up to well over rated output. The low (app. 600 ohm) output impedance is not only ideal for use with 600-ohm professional equipment, it also

reduces possible degradation due to the power amplifier connecting cable.

Four-Gang Volume Control and Subsonic Filter

Over and above its inherently high S/N ratio at rated output, the C-2 scores at much lower outputs too, with noise being reduced progressively for attenuations of greater than 20 dB. At $-\infty$ residual noise is actually zero. The secret is a four-gang volume control, giving control of both input and output levels in left- and right-hand channels. Level-setting is both continuous, for the finest possible adjustments, and accurate (± 0.5 dB to -15 dB, and only ± 1.5 dB at -70 dB), with precise balance over the whole range.

Also, to cut out low frequency rumble which can swamp power amplifiers and speakers without contributing anything to musical enjoyment, a 12 dB/octave filter cuts off frequencies below 15 Hz. It can normally be left on with no audible deterioration of audio quality.

A Truly Superb MC Head Amp

Many professional audio engineers and advanced amateurs agree in giving moving coil (MC) cartridges top marks for excellent 'resolution,' dynamic range, and tonal quality. The C-2 provides an additional stage of amplification for MC cartridges, which generally have very low outputs. Free from the drooping frequency response and non-linear distortion of transformers, the C-2 head amp consists of a specially developed Yamaha ultra-linear and super low noise integrated circuit: S/N is an amazing 70 dB for 50 μ V input, with crisp and accurate transients and extremely low distortion.



Other Important Features

Twin output terminals for Pre Out signals: useful for A/B testing of power amplifiers, for multi-amplifier configurations, and test purposes.

Complete isolation of Rec Out terminals: on the Rec Out Off setting, the C-2 is isolated from tape-recorder input circuits, eliminating any associated noise.

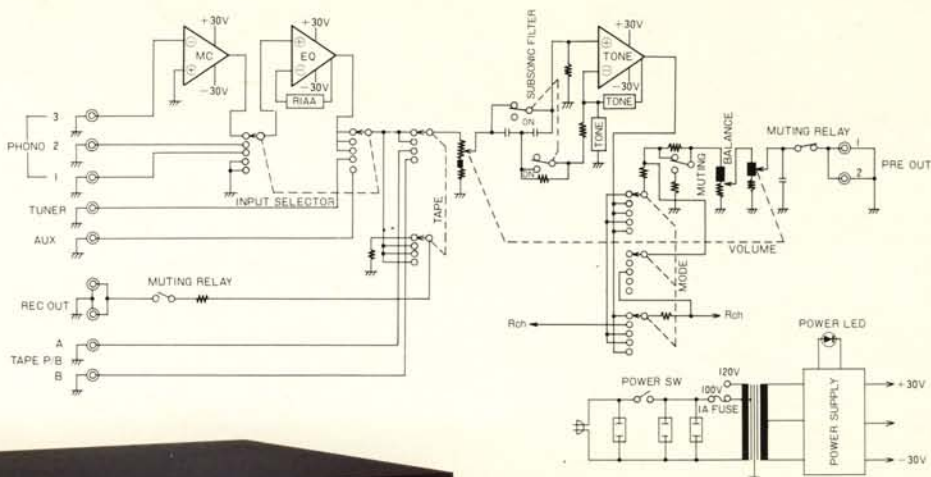
Tape recording and monitoring:

Full mode switching facilities: stereo, reverse, mono L, R, and L + R.

Audio muting: a straight 20-dB reduction of signal level without having to adjust the volume control.

High performance in actual use: double shielding of the equalizer amp, muting of both Rec Out and Pre Out terminals, and heavy duty terminals ensure top performance and long-term reliability.

BLOCK DIAGRAM



THE C-2 RANKS WITH THE FAMOUS C-1 IN YAMAHA'S LINEUP OF PROFESSIONAL PERFORMERS.



SPECIFICATIONS

| | | | |
|-------------------------------------|--|--|--|
| Input sensitivity/impedance | | | |
| Phono 1, 2 | 2 mV/47 k Ω | Phono 3 (MC) | 0.02% or less, 20 Hz to 20 kHz with -30 dB (775 mV output) |
| Phono 3 (MC) | 50 μ V/10 Ω | | 0.05% or less, 20 Hz to 20 kHz with max. vol. 0 dB (7.75 V output) |
| Tuner, Aux | 120 mV/47 k Ω | | 0.003% or less, 20 Hz to 20 kHz with -30 dB (775 mV output) and max. volume 0 dB (7.75 V output) |
| Tape PB A, B | 120 mV/47 k Ω | Tuner, Aux, Tape A, B | |
| Maximum input levels | | | |
| Phono 1, 2 | 300 mV (at 1 kHz) | | |
| Phono 3 (MC) | 7.5 mV (at 1 kHz) | | |
| Output level/impedance | | Signal-to-Noise Ratio (IHF-A, shorted input) | |
| Pre Out 1, 2 | 775 mV/400 Ω | Phono 1, 2 | 85 dB for 2 mV rated input |
| Rec Out A, B | 120 mV/660 Ω | Phono 3 (MC) | 99 dB for 10 mV input |
| Frequency response | | Tuner, Aux, Tape A, B | 70 dB for 50 μ V rated input (50 Ω short) |
| Phono 1, 2, 3 (RIAA deviation) | 30 Hz to 15 kHz \pm 0.2 dB | | 100 dB or more |
| Tuner, Aux, Tape A, B | 5 Hz to 100 kHz +0, -1.5 dB | | |
| Tone control characteristics | | Residual noise | $-\infty$ dB |
| Bass (turnover freq. 350 Hz) | \pm 0.5, \pm 1, \pm 1.5, \pm 2, \pm 3, \pm 4, \pm 5, \pm 6, \pm 8, \pm 10, dB (at 50 Hz) | General | |
| Treble (turnover freq. 3.5 kHz) | As above (at 20 kHz) | Power supplies (U.S. & Canada) | 120 V AC, 60 Hz |
| Subsonic filter | $f_c = 15$ Hz, -12 dB/octave | (other areas) | 120/230 V AC, 50/60 Hz |
| Audio muting | -20 dB, Off | Power consumption | 25 Watts |
| Distortion | | Semiconductors | 4 Yamaha FETs, 2 ICs, 63 Transistors, 23 Diodes, 7 Zener Diodes |
| Phono 1, 2 | 0.003% or less, 20 Hz to 20 kHz with -30 dB (775 mV output) and max. volume 0 dB (7.75 V output) | Dimensions (W x H x D) | 435 x 72 x 320 mm |
| | | Weight | 17 $\frac{1}{8}$ " x 2 $\frac{1}{8}$ " x 12 $\frac{1}{8}$ " |
| | | | 7.8 kg, 16 lbs. |

Specifications subject to change without notice.

For details please contact:

SINCE 1887



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