

The Model 203 Stereo System Control Center

AUDIO/HI-FI



A "no compromise" design effort means one thing to a manufacturer of consumer audio components. It means quite another to the engineers at BGW, the people responsible for the development of amplification systems which have set the design standards of the professional sound industry. The Model 203 Stereo Control Center reflects BGW's professional heritage: No compromise has been made in the design, no expense spared in the execution of the quietest, most flexible, and most reliable high-performance preamplifier now available to the discriminating audiophile. Incorporating innovative features ranging from dual-band amplification of the phono input stages to a new "active" equalization circuit, the Model 203 yields specs that define the "state of the art" in preamplifier performance.

Phono Input

Of all the input circuits, the phono stage presents the most difficult design task. As such, it represents one of the best tests of quality in preamplifiers. BGW's engineers have responded to the challenge of phono preamp design by constructing two discrete amplification circuits for each channel of the Model 203 phono input section. One processes signals below 1 kHz; the other, signals above that threshold. The feedback loop around each stage is designed to reproduce the appropriate portion of the standard RIAA curve. Nine low-noise silicon transistors per channel and precision resistors and capacitors result in tracking accuracy within .25 dB of the RIAA curve.

Active Equalization

The Model 203 Stereo Control Center employs new "active" equalization circuitry for the independent bass and treble control of each stereo channel. Unlike conventional passive tone control systems, the Model 203's equalization does not introduce significant distortion at moderate-to-high boost or cut settings. Detented switches are used instead of conventional potentiometers for reliable, accurate, and repeatable equalization. Each of the four 13-position rotary controls covers a 36 decibel range (± 18 dB boost or cut).

Signal To Noise Ratio

The Model 203 achieves an honest, statistically unweighted signal-to-noise ratio of better than 82 dB from 20 Hz to 20 kHz when referred to 10 millivolts. The power transformer is encased in steel to shield it from the 203's sensitive low-level circuitry. Careful selection of capacitors, resistors and transistors further maximizes the Model 203's excellent signal-to-noise ratio.

Versatility

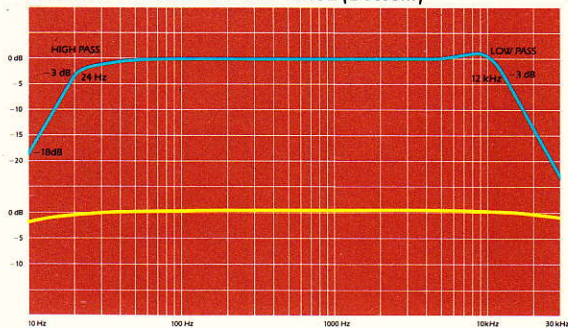
The Model 203 Preamplifier is compatible with virtually any signal source. A High/Low gain switch on the front panel extends the system's amplification range ("gain") by 12 dB. For exceptionally weak signals such as those generated by moving-coil phono cartridges, BGW's Model 60 Pre-Preamplifier can be connected to the 203. Active 18 dB per octave subsonic and scratch filters reduce turntable rumble and high-frequency noise to negligible levels. Front panel tape-copy and headphone jacks permit simultaneous monitoring and playback in several modes. A powerful output stage capable of driving 600-ohm lines allows the user to mount the power amplifier at a considerable distance from the Model 203 Preamplifier with no high frequency loss. High sensitivity headphones may be driven directly from the headphone output. Each of these features is designed to increase the convenience and versatility of the Model 203 Stereo Control System in its various applications.

Reliability and Quality

Dual-voltage regulated power supply circuits, precision thick-film rotary-detented controls, military-grade glass/epoxy circuit boards and a durable, heavy-gauge steel enclosure* are among the many features that have earned BGW components their "workhorse" reputation in demanding studio and stage applications around the world. All are incorporated in the Model 203 Stereo Control Center.

*Optional walnut cabinet available

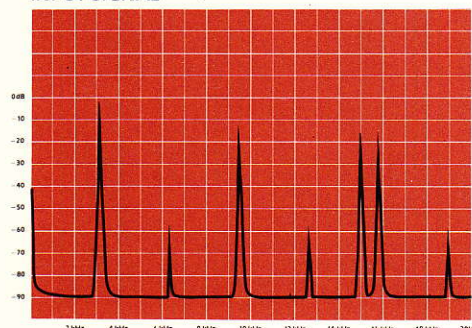
**HIGH AND LOW PASS FILTER RESPONSE (Top)
LINE AMP FREQUENCY RESPONSE (Bottom)**



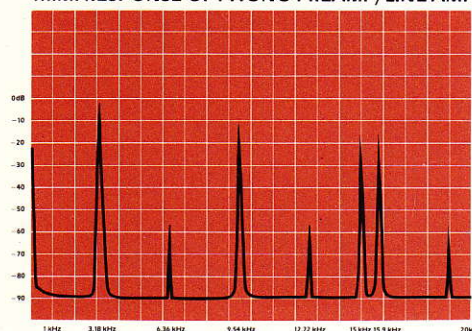
Test Equipment Utilized:
Sound Technology 1710A (sinewave source)
Hewlett Packard 3312A (square wave source)
Hewlett Packard XY Recorder
Hewlett Packard 3580A Wave Analyzer
Tektronix 7403N Oscilloscope
Data Precision Digital Multimeter
Weston Precision Line Monitor

+ 4 dBm Input Level,
Aux Input,
30 Hz Bandwidth

**TRANSIENT INTERMODULATION DISTORTION
INPUT SIGNAL**

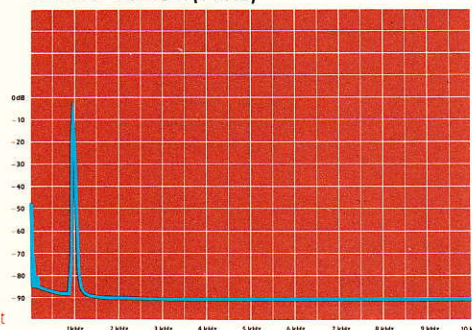


T.I.M. RESPONSE OF PHONO PREAMP/LINE AMP



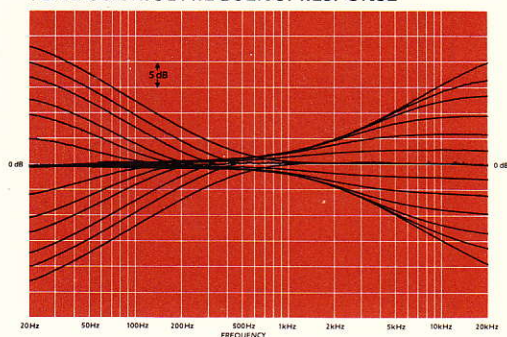
Output level: +4 dBm,
30 Hz Bandwidth

T.H.D. SPECTRUM (1 kHz)



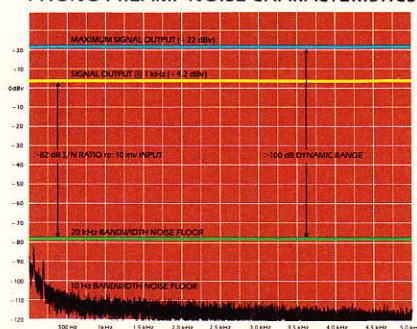
+ 4 dBm Output Level,
Phono In/Line Amp Out

TONE CONTROL FREQUENCY RESPONSE



0 dB = -10 dBv Output

PHONO PREAMP NOISE CHARACTERISTICS



SPECIFICATIONS

Gain:	Phono to tape output: 42 dB @ 1 kHz High level input to line output: Front panel switch in high position: 22 dB; Front panel switch in low position: 10 dB
Frequency Response:	±0.2 dB, 20 Hz to 20 kHz from high level inputs. ±0.25 dB of RIAA, 20 Hz-20 kHz from phono inputs.
Noise:	Phono E.I.N. = 0.8 microvolts with input shorted over 20 Hz-20 kHz, S/N RATIO = 82 dB (unweighted). High Level to line output greater than 90 dB below rated output in low gain mode, greater than 80 dB below rated input in high gain mode.
Total Harmonic Distortion:	Less than 0.01% at rated output, 20 Hz-20 kHz
Maximum Output Voltage:	Line out: 8 volts RMS into 600 ohms (+ 20 dBm); Phono at tape output: 10 volts RMS into 5K ohms. Rated output: 4 volts RMS into 5K ohms.
Dynamic Range:	100 dB (Phono Section)
Input Impedance:	Phono: 47K ohms High Level Inputs: 90K ohms
Input Overload:	Phono: 100 mV @ 1 kHz High Level: 10 volts
Tone Control Equalization:	± 18 dB at 50 Hz and 15 kHz @ 3 dB per step; front panel equalization defeat switch removes tone controls from circuit.
High and Low Pass Filters:	Active, 3-pole, 18 dB/octave. Low Frequency at 24 Hz; High Frequency at 12 kHz.
Inputs:	5 High Level inputs (1 tuner, 2 tape, 2 aux), two equalized phono
A.C. Outlets:	One switched by Preamp/Power switches, One switched by Preamp/Power switch only
Power Requirements:	Approximately 10 watts @ 120 or 240 volts A.C., 50-60 Hz
Dimensions:	19" W x 5 1/4" H x 1 1 3/4" D; 482.6mm x 133.3mm x 298.4mm*
Weight:	18.5 lbs. (40.7kg) net, 24 lbs. (52.8 kg) shipping

All specifications and features are subject to change without notice.



**BGW Systems, 13130 South Yukon Avenue, Hawthorne, California 90250
In Canada: Omnimedia Corp., 9653 Cote de Liesse, Dorval, Quebec H9P1A3**

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