About GML

The GML Design Rule

All-discrete circuitry
Discrete-transistor designs provide more headroom, less noise (i.e. more dynamic range), wider bandwidth, increased stability, resistance to high-frequency oscillation and the influence effects of out-of-band signals on audio.

DC-Servo Stabilized Throughout
Another GML innovation, highly stable DC servos correct DC offsets to sub-millivolt levels throughout. No audio-in-line electrolytic capacitors to age.

High Quality Passive Components
Precious metal XLR connectors and internal interconnections. Highest quality carbon-film potentiometers (not conductive plastic), metal-film resistors, polystyrene and Mylar capacitors, tantalum capacitors.

Transformerless Throughout
The audio input for each module is precision electronically-balanced. Outputs are direct-coupled, with no electrolytic capacitors to deteriorate.

Road Tested Designs
GML products are used on a daily basis by the most demanding professionals in the recording industry.

About George

Biography

George Massenburg, Inventor, Designer, Producer, Engineer, Educator.

George Massenburg has participated (individually and collaboratively) in over four hundred records over the past 45 years. His work includes recordings of Earth, Wind & Fire, Linda Ronstadt, Little Feat, Lyle Lovett, Aaron Neville, Mary Chapin Carpenter, Natasha Bedingfield, Herbie Hancock, Arlo Guthrie, Billy Joel, the Dixie Chicks and many more. His studio work has gained him international recognition and four Grammys (including the Grammy for Technical Achievement in 1998, at the time making him one of only seventeen individuals to receive that honor) as well as numerous Mix Magazine TEC Awards. In 1988 he also won the Academy of Country Music Record of the Year Award. George has designed, built and managed several recording studios, and has contributed to the acoustical and architectural design of many other studios, including George Lucas' Skywalker Sound.

In 1982, he founded George Massenburg Labs, a pioneering audio electronics company that has released an extensive range of innovative recording technologies, all based on his original designs.

George was awarded an honorary Doctorate of Music by Boston's esteemed Berklee College of Music. Regularly published in professional journals and trade magazines worldwide, George Massenburg received the Gold Medal from the Audio Engineering Society in 2008. In 2013 he was awarded a patent # 8,510,361 in the US (as well as other countries) for a variable exponent averaging detector and dynamic range controller. He is also a member of the National Recording Preservation Board of the Library of Congress and an advisor to the Committee for Library Information Resources. George serves as the Chief Technical Officer of META (the Music Engineering Technical Alliance), a strategic union of music producers and engineers dedicated to the highest standards of audio and delivery of music.

Currently he is an Associate Professor of Sound Recording at the Schulich School of Music at McGill University in Montreal, Quebec, Canada and a Visiting Lecturer at the Berklee College Of Music in Boston and Valencia Spain, and the University of Memphis in Memphis, TN. He and his wife, Cookie Rankin, live in Montreal, Quebec.

GML Model 2032

Product Overview:
Single Channel Microphone Preamplifier / Parametric Equalizer

The Model 2032 Microphone Preamplifier / Parametric Equalizer is a single-channel, multi-input device for high-resolution studio and remote applications. Based on the reference-standard Model 8300 Transformerless Microphone Preamplifier and Model 8200 Parametric Equalizer, this flexible 1U processor continues the GML engineering tradition while bringing the utmost in transparency, detail, and musicality to an affordable, compact form factor. The GML 2032 includes its own internal power supply.

MODEL 2032:MICROPHONE PREAMPLIFIER / PARAMETRIC EQUALIZER

SPECIFICATIONS*

FORM FACTOR

One channel, multi-input, gain, filter, parametric equalizer with insert capability and internal power supply Inputs: Mic (balanced, XLR), MI (Musical Instrument; unbalanced, 1/4” TS)

- Gain control: +15dB to +70dB, 5dB steps
- Fine control: -5dB to +5dB, continuously variable
- Phase switch, Phantom power (P48) switch
- Filter -- Second-order Butterworth active high-pass filter; 100Hz, flat, 40Hz Insert control: split parametric equalizer from preamplifier
- EQ section: four bands, fully parametric, continuously variable controls
- EQ IN switch
- Overload (OL) indicator: peak indication, preamplifier and equalizer

INPUT

- Microphone: 1 kOhm balanced >80dB CMRR, +17dBu max input before clipping
- Insert in: 20 kOhm balanced bridging, >40dB CMRR, +21 dBu max input before clipping
- MI: 1 MOhm unbalanced, +8.5dBu max input before clipping

THROUGHPUT

- Bandwidth:
- 0.1-dB / +0.002dB10> ,Hz to30< kHz, worst-case
  3-dB300< ,kHz and10>> Hz, typical
- %0.003>Harmonic distortion, 20Hz to 20kHz, typical
- %0.006>SMPTE Intermodulation distortion, typical
- 30V/usec discrete low-noise precision operational amplifiers, GML 9202 :
- Noise:
  -80dBu broadband, EQ engaged, typical
  -112dBu EIN, MI input
  -120dBu EIN, Microphone input (Rs = 150Ω, 30kHz BW), worst-case
  -80dB crosstalk, 20Hz to 20kHz, worst case

OUTPUT

- +27.0 dBu clipping
- < 3 mV output offset, stabilized by DC servo correction, direct coupled
- Wired pin 2 "hot”, 3-wire unbalanced

OTHER

- Internal linear power supply, 110V/220V switch, 50/60hz: +/-28 VDC, +/-18VDC, +48VDC
- Approx. power consumption: 28W; 500mA/250V slo-blo fuse installed (110V operation)
- Separate Ground & Chassis connections at rear
- 19" W x 1.75" H x 10" D rack mount chassis, black anodized aluminium, silver legend
- Weight: 11 lbs.

A*GML reserves the right to make changes to these specifications as it deems necessary. Individual unit performance may vary due to environmental influences, manufacturing variations, and component tolerances. Please refer to full Specifications sheet (included in the Model 2032 Owner’s Manual) for details.

Product Overview:
2 Channel, 5 band Parametric Equalizer

Brought to you from the man who invented the term “Parametric Equalization”, the 8200 has been an industry standard for over twenty years, and can be found on virtually every major recording studio’s stereo bus. Each of the five broadly-overlapping bands offers 15dB of Boost or Cut and adjustable bandwidth (or “Q”) from 0.4 to 4. The lowest and highest bands also can be switched to Shelf mode. Quite simply, the 8200 is the archetype Stereo Parametric Equalizer. Its extraordinary resolution, benchmark transparency, generous headroom, and surgical precision have been the reference for many other equalizers but exceeded by no other. The 2U 8200 uses one 8355 PSU.

The GML 8200 Parametric Equalizer is of a fifth generation progressive design, the result of ten years of creation, listening analysis, the most versatile and musical sounding circuit topology & fine tuned control parameters to satisfy the needs of the most demanding professional. Certainly the most carefully designed and constructed equalizer GML have produced, this new unit is hand built and calibrated in limited production quantities using selected components.

MODEL 8200 PARAMETRIC EQUALIZER

The GML 8200 Parametric Equalizer is of a fifth generation progressive design, the result of ten years of creation, listening analysis, the most versatile and musical sounding circuit topology & fine tuned control parameters to satisfy the needs of the most demanding professional. Certainly the most

carefully designed and constructed equalizer we have produced, this new unit is hand built and calibrated in limited production quantities using selected components.

SPECIFICATIONS

INPUT

- 20 kOhm balanced bridging
- 32 dB common mode rejection at 20kHz
- +27.4 dBv Maximum before clipping (+/- 28VDC supplies)

THROUGHPUT

- +/- 0.1 dB, 10 Hz to 80 kHz response (controls set flat)
- 0.002% Harmonic distortion at any frequency 20 Hz - 20 kHz1
- 0.002% SMPTE Intermodulation distortion2
- 30 v/usec discrete low noise, high performance amplifiers
- no tantalum or electrolytic interstage or output coupling capacitors
- noise -97.5 dBv bypassed, -78 dB or better typical (control position dependent)
- rolloff: 3 dB down at 260 kHz

FORM FACTOR - 2 CHANNELS, 5 BANDS: FULLY PARAMETRIC

1. 15 Hz - 800 Hz, Q of .4 - 4 or shelving, 15 dB boost/cut
2. 15 Hz - 800 Hz, Q of .4 - 4, 15 dB boost/cut
3. 120 Hz - 8 kHz, Q of .4 - 4, 15 dB boost/cut
4. 400 Hz - 26 kHz, Q of .4 - 4, 15 dB boost/cut
5. 400 Hz - 26 kHz, Q of .4 - 4 or shelving, 15 dB boost/cut

OUTPUT

- +27.4 dBv clipping
- 3 mv output offset, stabilized by D.C. servo correction

OTHER

- External power Supply: +28 volts
- Separate ground and chassis connections at rear
- 19" x 3-1/2" rack case, black anodized aluminium, silver legend, 8-1/2" deep
- Weight: 6 lbs

1 Includes Sound Technology 1710A residual, 30kHz LP filter
2 Measured at +20 dBv ST 1710A; analyzer residual 0.0018%