

PRECISION SOUND LEVEL METERS & SOUND CONTROL SYSTEMS

For detailed information refer to <http://www.gold-line.com/spl.htm>

Gold Line **SOUND PRESSURE LEVEL METER (dB METERS)** are precision Instruments and feature digital numeric displays which can easily be read from a distance. These meters have been designed to ANSI S1.4 standard as published by the American National Standards for sound level meters.



SPL 120

Model SPL 120—Portable battery operated dB meter with built-in microphone

Model SPL 120L—Portable battery operated dB meter with detachable omni microphone Range 35dB to 123dB

Model SPL 162—portable 162dB SPL meter

Model SPL 162R—Portable 162dB SPL meter with detachable microphone (included)

Model SPL 120RM3—Rack mount dB meter with 3 switchable inputs 3 MK8 microphones included



SPL 120RM3

CONTROL SOUND LEVELS

<http://www.gold-line.com/slc1.htm>



Model SLC 1— The Model SLC 1 is a single rack space Sound Pressure Level meter with special triggering circuits. When monitored sound exceeds a specified level, a relay connected to a switched output is activated. The switched output can then activate connected ancillary equipment which can be used to notify the manager, light a light, ring a bell, or activate a compressor. It can even be used to activate a counter to determine how often sound exceeds the specified level. The choice of ancillary equipment is made by the installer to accommodate the particular situation. A second relay allows the SLC1 to reduce sound levels by 6dB (20%) for 5 seconds. This feature is designed to encourage performers / DJs to reduce to the specified sound level.

SPL SIGN



- Rack Mounted Pressure Level Meter with electronic message display.
- Combine SPL readings with custom display messages.
- Visible at 150 feet

The **SPL SIGN** consists of a 19 inch rack mounted sound level meter that interfaces with a Beta Brite sign. It is supplied with a measurement microphone. The standard model measures sound levels up to 123dB. It can be supplied with a high SPL microphone to measure levels of sound up to 162dB. The SPL Sign is supplied with a controller allowing the user to either display the SPL or to program the display to show Specials, Upcoming Events, or any other message.

<http://www.gold-line.com/splsign.htm>

4 CHANNEL MICROPHONE MULTIPLEXER

- Expands the capability of single channel RTA's
- Averages up to four microphone positions
- Allows spatial averaging
- Analyzes overall response

A multiplexer is a device that allows a single channel Real Time Analyzer to average information from up to four microphone positions in a single test. When this information is processed by an analyzer that has "time averaging", the resulting curve is called "spatially averaged". Spatial averaging is recommended by all of the major film cinema/home theater organizations, including LucasFilm™, and Dolby™ Laboratories.

<http://www.gold-line.com/mx4.htm>



Model MX4

HEADPHONE AMPLIFIER

The HPAJr Headphone Amplifier is a compact, battery / external dc powered unit designed to interface your favorite full-sized professional headphone to a variety of audio input sources. You can use the HPAJr for such professional purposes as increasing monitor levels from: mixers, portable VCR's, tape recorders or R-DAT's; personal listening to keyboards and synthesizers or monitoring of home studio gear. Compact and durable, the HPAJr comes with a sturdy belt clip for complete portability. <http://www.gold-line.com/hpajr.htm>



Model TS1

AUDIO TEST SETS

<http://www.gold-line.com/testsets.htm>



Model TS2

FUNCTIONS:

The Low Distortion Oscillator:

A current controlled, state-variable true sine wave oscillator incorporating a fast AGC circuit. Distortion components are typically 0.1% 2nd and 0.05% 3rd which are low order and not audible making the TS1 & TS2 useful in making listening tests where a function generator would generate undesirable, audible side effects. Full frequency sweeps can be made from 20Hz - 20kHz in a single range. These units have no amplitude changes over the entire frequency range.

Frequency range: 10Hz - 30kHz

TS1RMX only: 10Hz - 27kHz

TS1RMX only: 63.2 ohms (balanced) output.

The Frequency Counter:

The frequency counter is internally connected to the internal oscillator and displays the oscillator frequency until a signal is plugged into the input connector. It then displays the frequency of the input signal. This unique combination allows absolute precision in setting frequencies.

Frequency response: 1Hz - 99.99kHz

The dB Meter:

The dB meter is a wideband average responding AC voltmeter. The circuit output is converted to dB for display. Direct reading dB greatly simplifies alignment procedures.

Meter Range: -50dBv to +24dBv ref: (0.775V)

TS1RMX only: -70dBv to +24dBv ref: (0.775V)

TS2 only - Impedance Meter:

The impedance meter measures complex impedance in ohms. It allows the user to set up and validate studio equipment, measure components, test loudspeakers and enclosures and to measure and validate distributed loudspeaker systems.

Range: 0 - 999 ohms with 0.1 ohm resolution (standard)
0 - 9999 ohms with 1 ohm resolution above 999 ohms (optional 10k version)



Model TS1RMX

TS1RMX features:

Inputs: Electronically balanced XLRs mounted on both front and rear panels. Isolated from chassis ground and sharing common ground with the output connectors.

Input Impedance: 100k ohms

Input Selector: Select between monitoring the Internal Oscillator at the Output Connector or an External Signal at the Input Connector.

Outputs: Electronically balanced XLRs mounted on both front and rear panels. Isolated from chassis ground and sharing common ground with the input connectors. The front and rear outputs are driven independently.

Front/Rear Selector: Select between monitoring the front or rear panel connectors.

PINK AND WHITE NOISE GENERATORS

<http://www.gold-line.com/pink.htm>

White noise is shaped and filtered to make Pink Noise which is an essential tool for running many tests on sound systems. Pink Noise provides equal energy per octave allowing the adjustment of equipment drive levels with constant Hz bandwidth analyzers such as Gold Line RTAs. The spectrum of pink noise approximates that of much music which makes it an excellent test signal for sound systems. Many people select pink noise in place of white noise since higher levels of white noise can burn out tweeters.



Model PN2

PN2: Pink Noise Generator providing continuous pink noise. Pink Noise has an equal amount of energy per octave of bandwidth.

PN2W: Pink/White Noise Generator providing continuous pink or white noise. White noise has equal amount of energy per Hz of bandwidth. Pink noise has equal amount of energy per octave of bandwidth

PN3A: Pink Noise Generator providing pink noise in continuous or burst format

PN3B: Pink Noise/Tone Generator providing pink noise or a 1KHz in continuous or gated format. Pink noise has equal energy per octave of bandwidth. The gate function

allows control of the pink Noise/Tone bursts via an external gating control such as provided by the DSP30 Spectrum Analyzer or can be triggered by an external switch closure or logical signal. This gated control is very useful for RT60 and Loudspeaker Delay Timing measurements

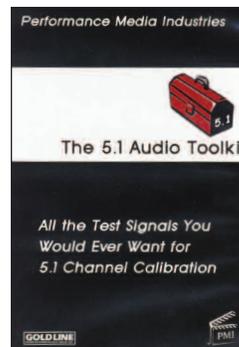


Model PN3B



Model PWN1

PWN 1: The PWN1 Personal White Noise Generator produces an adjustable audible random sound with an equal amount of energy per Hertz (Hz) of bandwidth, normally referred to as "White Noise" This sound can be used to acoustically mask selected environments and to reduce the intelligibility of adjacent conversations and reduce the chance of your conversation being overheard by someone else. White noise is also helpful alleviating the effects of tinnitus by providing a low level of broad band noise.



TK5.1: The 5.1 Audio Toolkit DVD

Contains over 80 Test signals laid out in a logical progression for quick calibration and debugging of 5.1 channel systems with THX Surround EX



Model GLPN is a handy pink noise tester built into an XLR microphone connector. It is

pocket sized, rugged and provides continuous pink noise plus a phantom power indicator. The GLPN, when time averaged, produces levels of plus or minus 1dB making it an excellent standard for "Flat" response. With the GLPN the user can adjust equalization and speaker crossover points and balance systems. This handy product can be used for sound masking systems and to provide greater privacy. It has also been utilized to help employees with tinnitus. The GLPN is powered by phantom powering and whenever Phantom Power is present the LED on the back will light. If the LED does not light then phantom power is not present.



MODEL GL14 A14 function sine wave generator with Phantom Power indicator. This is a

handy and cost effective pocket sized tool that belongs in every toolbox. The compact design features a microphone Level Output with 14 functions activated by a single push button. Packaged in a standard Neutrik XLR connector, The GL14 is easy to carry and easy to use. Its multiple function will help you with the analysis and calibration of sound systems and will facilitate trouble shooting. The internal amplifier in the GL14 utilizes phantom power from your XLR audio mic line to generate the tones. Sine waves are provided at 100Hz, 250Hz, 315Hz, 400Hz, 1kHz, 2kHz and 10kHz. Features include Simultaneous Low/High Sine Wave, Repeated pulse, Step thru all 7 sine wave, 1kHz at stepped levels, 2kHz pulse, and a signal to detect line breaks

OUTPUT: Unbalanced 3 pin XLR Male,
OUTPUT LEVEL continuous @ 24.5mV (-32.2dBV),
FREQUENCY : 20Hz to 20kHz, POWER: 12 Vdc - 48 Vdc

OUTPUT LEVEL - UNBALANCED: 14mV (-37.1dBV) @ 1kHz; 21.4mV (-33.4dBV) @ 10kHz.
POWER REQUIREMENTS: 12Vdc - 48Vdc phantom power.

ZM1 / ZM1P / ZM2N

<http://www.gold-line.com/zm1.htm>



ZM1P

The ZM1, ZM1P & ZM2N are unique test and measurement instruments that are useful to every sound contractor or installer.

The ZM1 *measures the impedance* of loudspeakers and entire distributed loudspeaker systems as well as individual components (resistors, capacitors, inductors). It will also *calculate the wattage* that will be produced on an installed loudspeaker system.

The ZM1P (*shown at left*) has all the features of the ZM1 and adds an *Overload Protection Circuit* that prevents the meter from being damaged from the amplifier output overloads up to 120VAC and a *Tone Generator* to improve system testing and performance.

These are rugged hand held battery powered instruments with special circuitry to prolong battery life. They come complete with high quality test leads.

The ZM2N (*shown at right*) takes the advanced features of the ZM1P a step further. Incorporating all the features of the ZM1P, the ZM2N provides *higher level tone output* - ideal for use in noisy environments. The ZM2N is battery powered and it can *also* be powered from any 115VAC or 220VAC* source and comes in a *virtually indestructible, crushproof carry case*. The lid is removable to allow access into tight spaces. The case employs compound latches, a locking feature and stainless steel hardware is used throughout. High quality test leads are supplied.



ZM2N
without cover



ZM2N
with cover closed

POLARITY ANALYZER

Model APT2 and APTB Absolute Polarity Analyzer

U.S. Patent #5,319,714

The Gold Line Polarity analyzers utilize state-of-the-art signal processing to accurately determine the absolute polarity which is unimpaired by passive crossovers or signal waveform distortions produced by the device under Test. The APT2 (unbalanced version) and the APT2B (balanced version) work on tweeters, mid-ranges, woofers, subwoofers and cabinets, plus equalizers, amplifiers and crossovers. With these handy instruments an entire system can be checked in only seconds. The new APT2B offers all the features and convenience of the original APT2 plus balanced outputs and inputs.

To check acoustical and electrical polarity, the generator is connected to the input of the device under test. The analyzer portion of the tester is utilized to pick up the output signal. The analyzer section also processes the information and decides whether the device under test reverses signal polarity or not. The results are displayed via two LEDs (+) indicates IN POLARITY and (-) indicates OUT OF POLARITY.

<http://www.gold-line.com/apt.htm>



APT2 (unbalanced)



APT2B (balanced)