

# OPERATOR'S MANUAL

**Model PN2/PN2W/PN3A/PN3B**  
**Audio Noise Source**

**AUDIO NOISE SOURCES:** A pink or white noise generator is an essential tool for running many tests on sound systems and their components. Adjustment of equipment drive levels must be made external to the generator. White noise has an equal amount of energy per Hz of bandwidth. For example, there would be equal energy from 20Hz to 21Hz as there would be from 20,000Hz to 20,001Hz. This characteristic is most useful with what are called constant Hz-bandwidth analyzers, which most swept-spectrum analyzers are. White noise is easily shaped or filtered to make pink noise which has equal energy per octave of bandwidth (or in each fraction of an octave). For example, there is equal energy in the octave centered at 125Hz and in the octave at 2kHz, or any other within the limits of the generator. Pink noise thus produces a flat response in constant-percentage bandwidth analyzers such as the Gold Line analyzers and other RTAs (real time analyzers). The spectrum of pink noise also approximates that of much music with less power per Hz (-3dB/octave) with increasing frequency. This makes it an excellent test signal for sound systems, where white noise could burn out tweeters. At lower levels, white noise can be used for critical listening checks and some other tests, but pink noise is much more useful, in general.

**PN2 - PRODUCT DESCRIPTION:** Pink noise generator providing continuous pink noise.

**OUTPUTS:** Signal out: unbalanced ¼" jack, impedance of 620Ω.  
The PN2 is activated by inserting ¼" plug in output jack.

**OUTPUT LEVEL:** Continuous @ 83dB - 85dB ref; 97dB SPL, 55mV

**FREQUENCY RANGE:** 20Hz - 20kHz

**POWER REQUIREMENTS:** 9V battery. To access, remove 2 screws on side of case and separate cover from case.

**APPROVALS:** Emissions: EN55022 B - FCC CLASS B  
Immunity: EN55024 B

**SIZE (W x H x D); WEIGHT:** 1.75" x 2.75" x 1.75"; 2 oz.

**CASE MATERIAL:** High impact ABS.

**PN2W - PRODUCT DESCRIPTION:** Noise generator providing continuous pink or white noise.

**OUTPUTS:** Signal out: unbalanced RCA jack, impedance of 620Ω.

**OUTPUT LEVEL:** Pink noise - Continuous @ 83dB - 85dB ref, 98dB SPL, 62Mv  
White noise - Continuous @ 83dB - 85dB ref, 98dB SPL, 62mV

**FREQUENCY RANGE:** 20Hz - 20kHz

**POWER REQUIREMENTS:** 9V battery. To access, remove 2 screws on side of case and separate cover from case.

**APPROVALS:** Emissions: EN55022 B - FCC CLASS B  
Immunity: EN55024 B

**SIZE (W x H x D); WEIGHT:** 1.75" x 2.75" x 1.75"; 2 oz.

**CASE MATERIAL:** High impact ABS; **FRONT PANEL:** Anodized Aluminum.

**PN3A - PRODUCT DESCRIPTION:** Pink noise generator providing pink noise in continuous or burst format.

**OUTPUTS:** unbalanced ¼" jack, impedance of 620Ω.  
The PN3A is activated by inserting ¼" plug in output jack.

**OUTPUT LEVEL:** Continuous @ 95dB - 97dB ref, 110dB SPL, 245mV  
RT60 burst: 11s  
STA (loudspeaker timing) pulse: 9ms  
Time off control: 10s - 150s.

**FREQUENCY RANGE:** 20Hz to 20kHz

**POWER REQUIREMENTS:** 9V battery. To access, slide back plastic cover on rear of case.

**APPROVALS:** Emissions: EN55022 B - FCC CLASS B  
Immunity: EN55024 B

**SIZE (W x H x D); WEIGHT:** 2½" x 4" x 1½"; 6 oz.

**CASE MATERIAL:** High impact ABS.

**PN3B - PRODUCT DESCRIPTION:** Pink Noise/Tone Generator providing pink noise or a 1kHz tone in continuous or gated format. Pink noise has an equal amount of energy per octave of bandwidth. The gate function allows control of the Pink Noise/Tone bursts via an external gating control such as a DSP30 Spectrum Analyzer or an external switch closure or logical signal.

**OUTPUT:** Unbalanced ¼" jack, impedance 620 ohms. The PN3B is activated by inserting a ¼" plug in output jack.

**GATE INPUT:** 3.5mm mono jack

**OUTPUT LEVEL:** 95dB - 97dB ref, 110dB SPL, 245mV. Duration of gated output is user controlled

**FREQUENCY RANGE:**

**Pink Noise:** 20Hz - 20kHz - **1kHz:** 1kHz Nominal

**POWER REQUIREMENTS:** 9V battery. To access, slide back plastic cover on rear of case.

**APPROVALS:** Emissions: EN55022 B - FCC CLASS B  
Immunity: EN55024 B

**SIZE (W x H x D); WEIGHT:** 2½" x 4" x 1½"; 6 oz.

**CASE MATERIAL:** High impact ABS.

WARRANTY and Factory Service

GOLD LINE products are proudly made in the USA and are covered by a one year limited warranty. For details of this warranty, consult the enclosed warranty registration card or your local dealer.

GOLD LINE Customer Service will help you get the most from your new generator. For answers to questions regarding use of the unit, or for information not covered in this manual, please write us. If you are experiencing difficulties with your generator, please consult your dealer regarding factory service. If factory service is needed, you may call or fax us between 9:00am and 4:30pm US Eastern Time for instructions and a return authorization.

**Enter your serial#** \_\_\_\_\_ **date of purchase** \_\_\_\_\_

11-25 m\_pn23\_8b05.doc



Box 500 West Redding, CT. 06896 203-938-2588 phone - 203-938-8740 fax  
<http://www.gold-line.com> Email - [sales@gold-line.com](mailto:sales@gold-line.com)