Made in Denmark for **3M Health Care**, St. Paul, MN 55144
(U.S.A.) 1 800 228-3957 • Fax 651 736-2803
Visit our web site: http://www.3M.com/Littmann

⚠ Attention, see instructions for use.
CE 0086 **3M Health Care** D-41453 Neuss, Germany

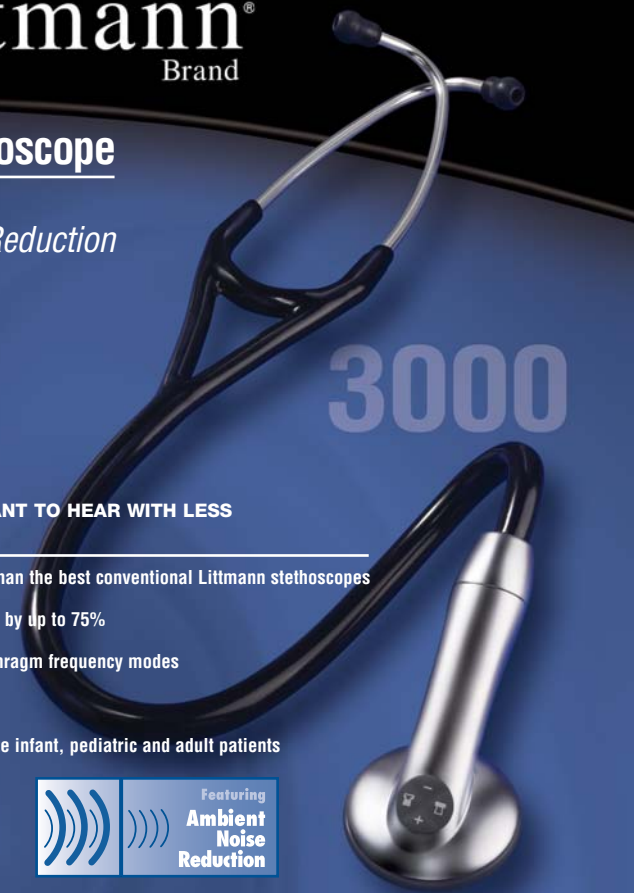
38-9018-6523-8

3M

Littmann® Brand

Electronic Stethoscope

MODEL 3000
with Ambient Noise Reduction



AMPLIFY THE SOUNDS YOU WANT TO HEAR WITH LESS DISTRACTING AMBIENT NOISE

- Amplification up to 18 times greater than the best conventional Littmann stethoscopes
- Reduction of unwanted ambient noise by up to 75%
- Easy to switch between bell and diaphragm frequency modes
- Lightweight and well-balanced
- Versatile chestpiece can accommodate infant, pediatric and adult patients
- Ergonomic, single-button operation
- Uses one AAA battery

Featuring Ambient Noise Reduction

3M™ Littmann® Electronic Stethoscope Model 3000 *with Ambient Noise Reduction*

Congratulations and thank you for choosing the 3M™ Littmann® Electronic Stethoscope Model 3000 *with Ambient Noise Reduction*, the next generation stethoscope that offers the very latest in advanced auscultation technology.

This powerful, electronic stethoscope provides the superior acoustic sensitivity users have come to expect from the Littmann brand, **and more.** It includes state-of-the-art amplification and filtering systems, ideal for picking up difficult-to-hear heart and other body sounds. It features ambient noise reduction technology (patent pending) that reduces up to 75% of distracting room noise. The versatile chestpiece can accommodate infant, pediatric and adult patients, and it is ergonomically designed for easy hand manipulation and patient comfort.

Powered by a single AAA battery, the stethoscope is conveniently controlled by a single button on top of the chestpiece. Amplification, up to 18 times greater than the best conventional scopes, and an advanced filtering system providing two frequency modes (standard bell and diaphragm) allow outstanding heart and lung auscultation.

Because of the unique design of its diaphragm, the Model 3000 can be used comfortably on all body types and sizes. The eartubes are capped with 3M™ Littmann® Snap Tight Soft-Sealing Eartips for excellent acoustic seal and comfortable fit. They, and more importantly, the patented ambient noise reduction technology internal to the chestpiece, significantly reduce distraction from unwanted room noise, greatly enhancing overall utility.

With its ergonomic design, state-of-the-art amplification and filtering systems, and ambient noise reduction technology, the Littmann Electronic Stethoscope Model 3000 is a powerful, effective tool for health care professionals. Most of all, know that the Model 3000 carries the Littmann brand name, the name known worldwide for unsurpassed quality. As a trusted leader in auscultation technology, the Littmann brand is your assurance of acoustic superiority, innovative design, and exceptional performance.

The following symbols are applicable to this device:

- ⚠ • Attention, see instructions for use.
-  • Indicates Type B Equipment: The equipment provides protection against electrical shock and electrical current leakage.
- **IPX4** • Protected against splashing liquid (chestpiece only).
-  • This product and package do not contain natural rubber latex.

Each Littmann Electronic Stethoscope Model 3000 has a serial number beginning with the letter “R”.

Indications:

This device is intended for medical diagnostic purposes only. It can be used for the amplification of faint heart, lung, and other body sounds as well as normal auscultation and selective frequency filtering. This product is not designed, sold, or intended for use except as indicated.

⚠ Caution:

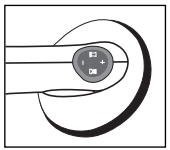
Failure to follow the directions in this manual could result in damage to the device or possible injury to the user.

Failure to follow general use and maintenance recommendations could result in damage to the internal components of the Littmann Electronic Stethoscope. Internal damage could cause malfunction of the product, ranging from a slight decrease in auditory response to complete failure of the product.

- Stethoscope not suitable for use in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide.
- Use only AAA alkaline batteries. Carefully follow all cautions, warnings, and instructions on the battery package. When the Low Battery Indicator Tone is heard, replace the battery within two hours. There is no acoustic (non-amplified) mode available in the Littmann Electronic Stethoscope.
- The Littmann Electronic Stethoscope has been tested to be resistant to both electromagnetic fields (EMI) and electrostatic discharge (ESD). However, it may be susceptible to very strong radio frequency signals or portable and/or mobile RF devices. When using your stethoscope, if you hear sudden or unexpected sounds, you may be in close proximity to a strong radio transmitter. If this should occur, move away from the radio’s transmitting antenna.
- Do not immerse the stethoscope in any liquid or subject it to any sterilization processes.
- At the end of this device’s useful life, dispose or recycle in accordance with your local, state, and governmental regulations.
- Refer to appendix for information relating to electromagnetic compatibility testing.
- If you experience any problems with the Littmann Electronic Stethoscope, do not attempt to repair it yourself. Please notify the 3M Health Care Service Center at 1-800-292-6298 for directions on shipping and receiving.

Instructions for Use:

The stethoscope is controlled by a single button on the top of the chestpiece and has four activation points identified as follows:



Button symbol	Function
▼	Bell filter button Single Tone
⧖	Diaphragm filter button Double Tone
+	Increase volume button (Single tone representing volume increase each time button depressed)
−	Decrease volume button (Single tone representing volume decrease each time button depressed)

Turning on the Stethoscope

The device may be activated by pushing one of the two filter-mode button

▼ or ⧖ .

(The specific identifying filter tone will be heard upon activation)

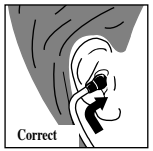
Operation

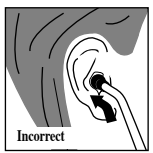
Select the frequency mode desired for auscultation by pushing either the bell or diaphragm filter symbol (this is accomplished when activating the stethoscope initially). Adjust the volume to the desired level by pushing either the plus or minus symbol. At the 3rd volume level, the stethoscope is set to the approximate gain of a typical acoustic stethoscope (this is the preset volume level when you receive the stethoscope).

You can change the preset volume level by holding down the volume button at the desired volume until you hear a double tone signal. The stethoscope will start at that volume level each time the scope is turned on until you program it differently. Changing the volume during auscultation will not affect the preset volume setting you have established.

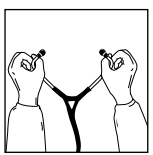
Auscultate as you would using an acoustic stethoscope. It is important to find a comfortable grip that allows you to hold the stethoscope in a secure but relaxed manner. Use the bell and diaphragm modes to accentuate or attenuate different heart and body sounds. Low frequency sounds have a tendency to mask or obscure the high frequency sounds. Adjust volume control as necessary.

Headset Positioning

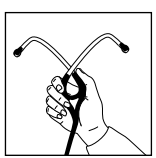




Your new Littmann Electronic Stethoscope is designed to give you a very comfortable, acoustically sealed ear fit. Notice that the eartubes are permanently set at an angle to accommodate the typical anatomy of the ear canal. The eartips should point in a forward direction as you insert them into your ear canals.

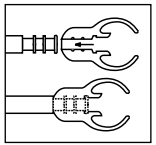


To reduce spring tension in the headset, hold each eartube at the bend near the eartip and gradually pull apart until fully extended (180 degrees).



To increase spring tension, grasp the headset with one hand where the eartubes enter the plastic tubing and squeeze until the plastic tubing on one eartube touches the other. Repeat as necessary.

For maximum acoustic performance, comfortable patented Littmann Soft-Sealing Eartips are provided with your stethoscope.



The stethoscope utilizes a unique design for attaching the eartip to the eartube. The eartips are pushed on to the end of the eartube and snapped tight. To remove, pull firmly on the eartip.

Additional Littmann eartips are available. To order, contact your Littmann Stethoscope distributor or the 3M Health Care Service Center.

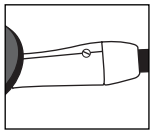
Turning Off the Stethoscope

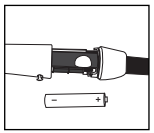
The stethoscope will automatically turn itself off after 3 minutes of no button activation. You can also turn the scope off manually by depressing either filter mode button and holding it down until you hear a diminishing triple tone.

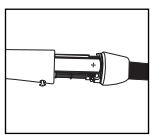
Battery Life

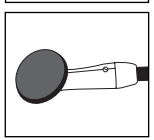
The battery will last for approximately 200 hours of continuous use. In a typical clinical setting, this represents about six months. When the Low Battery Indicator Tone is heard, sufficient battery power remains for approximately 2 hours of normal auscultation activities. When the battery is completely depleted the scope becomes inoperable. It is important to remember that there is no acoustic (non-amplified) mode available in the Littmann Electronic Stethoscope. When the battery is finally exhausted, the stethoscope will not operate.

Battery Replacement









To insert or replace the battery, use a coin to loosen the screw on the underside on the neck of the chestpiece and slide open the battery compartment. Remove an old battery by pushing through the slot on the backside of the battery compartment. Insert a fresh battery with the positive end toward the eartubes (the plus sign will be visible in the battery compartment after insertion). Slide the compartment closed and tighten the locking screw.

One battery is enclosed for use with the Littmann Electronic Stethoscope.

Use AAA alkaline batteries only (IEC LR03, 1.5V). Carefully follow all instructions and warnings on the battery label and package.

Remove the battery when the stethoscope will not be used for several months.

General Use and Maintenance

Cleaning The Chestpiece

Under normal conditions, it is unnecessary to remove the diaphragm for cleaning. The diaphragm can easily be cleaned by using an alcohol wipe. If, however, it is necessary to remove the diaphragm, carefully follow the instructions below.

Diaphragm Removal

With diaphragm side up, using a thumbnail, lift the underside portion of the diaphragm out of its designated groove, and peel it off of the chestpiece. The groove that holds the diaphragm in place can be cleaned by sliding the edge of an alcohol swab around the groove. All parts of the chestpiece can be wiped down with alcohol. IMPORTANT: The stethoscope should not be immersed in any solution. Excess liquid used in the cleaning process can result in moisture getting into the internal components.

Diaphragm Reassembly

Once the diaphragm is completely dry, insert the diaphragm into the groove of the rim, starting at one point, and run your finger around the diaphragm until it is seated back in the groove.

Other Considerations

- To extend the life of your stethoscope, avoid extreme heat, cold, solvents and oils.
- Eartips, eartubes, plastic tubing and chestpiece can be wiped clean with alcohol.
- Do not immerse the stethoscope in any liquid or subject it to any sterilization process.
- Eartips can be removed for a more thorough cleaning.
- Remove the battery whenever the stethoscope will not be used for several months.
- Operating range 32˚ to 122˚F (0 to 50˚C), 15 to 95% relative humidity.

Failure to follow care and maintenance recommendations could result in damage to the internal components of the Littmann Electronic Stethoscope. Internal damage could cause malfunction of the product, ranging from a slight decrease in auditory response to complete failure of the product.

If you experience any problems with the electronic stethoscope, do not attempt to repair it yourself. Please notify our 3M Health Care Service Center for directions on shipping and receiving.

Littmann Stethoscope Service and Warranty Program

Your Littmann Electronic Stethoscope comes with the finest service and warranty policy in the industry. The Littmann Electronic Stethoscope Model 3000 is warranted against any defects in material and manufacture for a period of two years. If a material or manufacturing defect is discovered during the warranty period, repairs will be made without charge upon the return of the instrument to 3M, except in cases of obvious abuse or accidental damage.

For maintenance or repair services in the U.S.A., send your stethoscope directly to:

3M Health Care Service Center
3M Bldg 502-1W-01
3350 Granada Ave N
Suite 200
Oakdale, MN 55128
1-800-292-6298

Include your name, address, and phone number inside with your stethoscope.

In Canada:
3M Health Care Service Centre
3M Canada Inc.
80 Enterprise Drive South
London, Ontario
Canada N6N1C2
1-800-563-2921

Outside of the U.S.A. and Canada, contact your local 3M subsidiary for maintenance and repair information.

Appendix:

Table 201

Declaration – Electromagnetic Emissions		
The 3M Littmann® Electronic Stethoscope, Model 3000, is intended for use in the electromagnetic environment specified below. The customer or the user of the Model 3000 should assure that it is used in such an environment.		
Emissions test	**Compliance**	**Electromagnetic environment – guidance**
RF emissions CISPR 11	Group 1	Model 3000 uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class B	Model 3000 is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Not applicable	
Voltage fluctuations/flicker emissions IEC 61000-3-3	Not applicable	

Table 202

Declaration – Electromagnetic Immunity			
The 3M Littmann® Electronic Stethoscope, Model 3000, is intended for use in the electromagnetic environment specified below. The customer or the user of Model 3000 should assure that it is used in such an environment.			
Immunity test	**IEC 60601 test level**	**Compliance level**	**Electromagnetic environment –guidance**
Electrostatic discharge (ESD IEC 61000-4-2	± 6 kV contact ± 8 kV air	± 6 kV contact ± 8 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material the relative humidity should be at least 30 %
Electrical fast transient/burst IEC 61000-4-4	± 2 kV for supply lines ± 1 kV for input/output lines	Not applicable	
Surge IEC 61000-4-5	± 1 kV differential mode ± 2 kV common mode	Not applicable	
Voltage dips, short interruptions and voltage variations on power supply lines IEC 61000-4-11	< 5 % U_T (>95 % dip in U_T) for 0.5 cycle 40 % U_T (60 % dip in U_T) for 5 cycle 70 % U_T (30 % dip in U_T) for 25 cycle < 5% U_T (>95 % dip in U_T) for 5 sec	Not applicable	
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

Table 204

Declaration – Electromagnetic Immunity (Continued)			
The 3M Littmann® Electronic Stethoscope, Model 3000, is intended for use in the electromagnetic environment specified below. The customer or the user of Model 3000 should assure that it is used in such an environment.			
Immunity test	**IEC 60601 test level**	**Compliance level**	**Electromagnetic environment –guidance**
			Portable and mobile RF communications equipment should be used no closer to any part of the Model 3000, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance**
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	Not applicable	d = 1.2 √ *P*
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	3 V/m 80 MHz to 2.5 GHz	d = 1.2 √ *P* 80 MHz to 800 MHz d = 2.3 √ *P* 800 MHz to 2,5 GHz where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and *d* is the recommended separation distance in meters (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, [a] should be less than the compliance level in each frequency range, [b] Interference may occur in the vicinity of equipment marked with the following symbol:
NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies. NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			
[a] Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which Model 3000 is used exceeds the applicable RF compliance level above, the Model 3000 should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the Model 3000. [b] Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.			

Table 206

Recommended Separation Distances Between Portable and Mobile RF Communications Equipment and the 3M™ Littmann® Electronic Stethoscope Model 3000			
The Model 3000 is intended for use in the electromagnetic environment in which the RF distance are controlled. The customer or the user of the Model 3000 can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the Model 3000 as recommended below, according to the maximum output of the communications equipment.			
Rated maximum output power of transmitter, P [W]	**Separation distance according to frequency of transmitters, d [m]**		
	150 kHz to 80 MHz	80 Mz to 800 MHz d = 1.2 √ *P*	800 MHz to 2,5 GHz d = 2.3 √ *P*
0.01	0.12	0.12	0.23
0.1	0.38	0.38	0.73
1	1.2	1.2	2.3
10	3.8	3.8	7.3
100	12	12	23
For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer. NOTE 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies. NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			