

Instruction Manual

Nasco Healthcare Auscultation Trainer 2.0



LF01290 & LF01290EX

About The Simulator

The Nasco Healthcare Auscultation Trainer 2.0 features 33 Heart, Lung, and Bowel Sites for Auscultation. The Simulator duplicates human conditions as closely as modern plastics, electronics, and programming will allow. This updated version also includes a Default Scenario with LED-Assist. Each group of sites (Heart, Lung, and Bowel) is color-coded and can be customized. Both the Auscultation Trainer Torso 2.0 and the Smart Scope 2.0 devices are newly configured with USB-C charging capability.

List of Components:

1. Auscultation Trainer Torso 2.0
2. Smart Scope 2.0
3. iPad (LF01290 Only)
4. Carry Case
5. Quick Start Guide
6. Dual-Head Stethoscope
7. USB-C Charging Cable



Set Up:

1. Remove Torso, Scope, and iPad from Carry Case
2. Ensure the Trainer Torso and Scope are completely charged before use.
3. Download the Be READY Auscultation App onto the iPad
4. Press the Power Buttons on both Torso and Scope. The Torso Trainer Button will illuminate Blue when device is ON. The Scope contains a Grey Power Button and has Green LED illumination to indicate Power is ON.
5. Open the Be READY Auscultation App on the iPad
6. When both devices are available for Bluetooth connection, they will appear in the App as Devices .
7. Ensure each device appears.
8. To connect the Torso, select it's device name and press Connect. When connected the indicator will change from Red to Green.
9. Repeat for the Scope. When the Scope is connected it has Blue LED illumination.
10. To begin, select Auscultation Simulation.
11. Select a Scenario in the bottom right, or remain in Default Scenario.
12. Press Set as Active Scenario and press Start Scenario.
13. LED lights will illuminate when device is ready to use
14. Place Stethoscope heads in the ears gently and use the Scope to find the required site.
15. Training Mode (Train) can be selected and will illuminate individual sites, sequentially.

Smart Scope 2.0 Schematic



Customization

1. Each site can be customized. Select Add Scenario and design your own procedure.
2. Customize the color of the Site, the sound to be played, and if the LED light is to be ON.
3. Files can be saved and exported based on User Performance.

Care and Maintenance

1. Ensure Trainer is kept upright.
2. Avoid pulling or grasping on the skin material.
3. Avoid Ink. All ink will leave indellible marks.
4. Ensure units are fully charged before use.

Troubleshooting

1. Trouble downloading the App:
 - A. Re-download from App store if necessary.
 - B. Please note at the present time the app is only downloadable via the Apple App Store and is not compatible with Android Devices.
2. Connecting to the App
 - A. Ensure both devices are charged and turned on
 - B. If no connection is established, or the device does not appear, restart the app.
3. Training Mode
 - A. In this mode the trainer will illuminate a single site in-order. After the site is located by the Smart Scope, the trainer will proceed to the next site.

Replacement Parts & Supplies

- LF01291: Auscultation LED Controller Replacement
- LF01292: Smart Scope 2.0
- LF01293: Auscultation Teaching Scope Splitter Replacement
- LF09919: Nasco Cleaner

Warranty

This manikin is covered under a 5-year warranty.
Details can be found on the Nasco Healthcare website.



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Be READY™ Auscultation App



AUSCULTATION Battery 100%

COMPLETE VIEW

Front Back

Left Side Right Side

SITE MANAGER

ID	Site	Sound File	LED	Play Sound
01	Aorta	Normal-Heart.wav	●	✓
02	Pulmonic	Aortic	●	✓
03	Erbs Point	ASD.wav	●	✓
04	Tricuspid	Holosystolic	●	✓
05	Mitral	Mid-Systolic	●	✓
06	7L-ICS	Pulmonary Valve	●	✓
07	5L-ICS	Bronchovesicular.wa	●	✓
08	3L-ICS	Bronchial.wav	●	✓
09	1L-ICS	Cavernous.wav	●	✓
10	L-APICAL	Egophony.wav	●	✓
11	TRACHEA	Pleural Rubs.wav	●	✓
12	R-APICAL	Wheeze.wav	●	✓
13	1R-ICS	Pulmonary	●	✓

SESSION

Selected Scenario: DefaultScenario

Volume Session Time 0:00

SS Audio Tablet Audio LED Feedback Train mode

LOG SCENARIOS

ID	Site	SoundFile

Scenario	Value
DemoScenarioA	True
DemoScenarioB	False
DefaultScenario	False

Save Session Reset

ADD SCENARIO

A

B

C

F

D

E


Application Guide

- A Complete View:** Anatomical views of all sites in standard colors.
- B Site Manager:** For each site, Color, Name, and Sound File can be customized
- C Session Panel:**
 - Display's Selected Scenario
 - Adjust Volume and location(s) to Play Sounds (Scope and/or iPad)
 - Enable or Disable LED Feedback
 - Select Train Mode to enable single site illumination in numerical order
- D Scenarios:** A list of Scenarios programmed into the device.
- E Add Scenario:** Select to create a Custom Scenario.

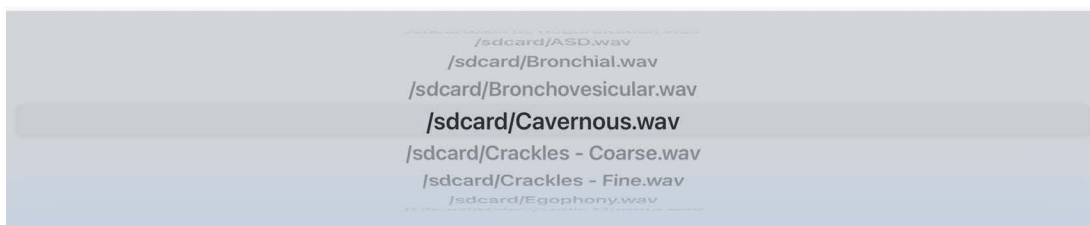
AddScenario

SCENARIO NAME

ADD NFC SITE

ID	Site	Sound File	LED Color	Play Sound
Select Site ID		Select Sound File		<input type="radio"/>

1. Create Scenario Name / Upload Custom Audio File
2. Select ID Site, Customize Sound File, LED Color, Enable Sound, and Add Site to Scenario



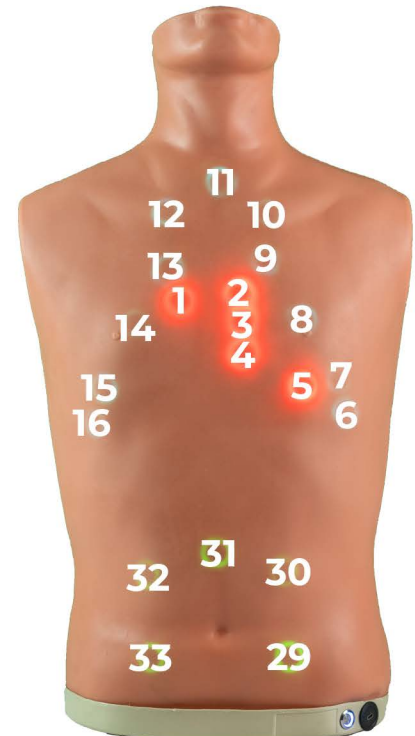
- F Log:** Site Data that appears as user proceeds through the Scenario can be saved.

Site Names and Locations

Number	Site Name
1	Aorta
2	Pulmonic
3	Erb's Point
4	Tricuspid
5	Mitral Valve
6	Sixth Left Intercostal Space
7	Fifth Left Intercostal Space
8	Third Left Intercostal Space
9	First Left Intercostal Space
10	Anterior Left Apical
11	Anterior Trachea
12	Anterior Right Apical
13	First Right Intercostal Space
14	Third Right Intercostal Space
15	Fifth Right Intercostal Space
16	Sixth Right Intercostal Space
17	Mid Axillary Left
18	Lateral Basal Left
19	Posterior Basal Left
20	Superior Left Lower Lung
21	Posterior Left Upper Lung
22	Posterior Left Apical
23	Posterior Right Apical
24	Posterior Right Upper Lung
25	Superior Right Lower Lung
26	Posterior Basal Right
27	Lateral Basal Right
28	Mid Axillary Right
29	Left Lower Quadrant
30	Left Upper Quadrant
31	Aortic Bowel
32	Right Upper Quadrant
33	Right Lower Quadrant



**Anatomical
Right**



Anterior



Posterior



**Anatomical
Left**

Heart Sounds

Sound	Description
Normal	Includes a first and second sound both sounding normal
Aortic Regurgitation	Has a decrescendo murmur starting early in diastole. S1 and S2 are normal, and the murmur is high pitched
ASD - Atrial Septal Defect	S2 is Split with a brief diamond-shaped murmur in early systolic period
Holosystolic Murmur	A murmur that begins immediately after the first heart sound(S1) and goes to the second. This is done with a high-pitched murmur.
Mid-Systolic Click	Both S1 and S2 are normal however there is a small click beat between the two that is very audible.
Mid-systolic Murmur	Murmur sound occurring between the first and second beat during the systolic period. The murmur is diamond shaped.
Mitral Stenosis	The S1 is increased in intensity while S2 is normal and unsplit. A diamond shaped murmur at low frequency follows the S2 during the diastolic period.
Pulmonary Valve Stenosis	S1 is normal and the normal splitting of S2 is widened. Harsh diamond-shaped ejection murmur right before S2
S3 Gallop	The S3 (Third Heart sound) is low pitched beat that comes directly after the second beat but right before the next S1
S4 Gallop	The S4 (Fourth Heart sound) is a low-pitched beat that comes shortly before the S1 (late diastolic period)
PDA - Patent Ductus Arteriosus	The S1 and S2 are normal with a continuous diamond-shaped murmur which runs from the beginning of the systolic period to the end of the diastolic period peaking at S2
VSD - Ventricular Septal Defect	The S1 is normal and S2 is unsplit (skips a beat) with S3. A medium-pitched murmur is heard throughout all the systolic period

Bowel Sounds

Sound	Description
Normal	Consists of moderate clicks and gurgles
Hyperactive	Similar to normal bowel sounds but with more activity and loudness in clicks and gurgles
Hypoactive	Similar to normal bowel sounds but with less activity and quietness in clicks and gurgles

Lung Sounds

Sound	Description
Vesicular Normal Breathing	Soft and low-pitched with a rustling quality during inspiration (Inhaling) and are even softer during expiration (Exhaling).
Egophony	A voiced sound (often heard while saying "A" or "E") with a nasal quality. Described as a goat bleating.
Pulmonary Edema	A fine crackle sound due to an excess of liquid in lungs
Bronchovesicular	Normal breathing heard in the mid-chest. The amount of inhaling and exhaling is the same. The pitch is a combination of Bronchial and Vesicular.
Bronchial	Hollow sound with a tubular quality and higher pitch compared to vesicular. Exhaling is slower than inhaling.
Crackles - Fine	Described as popping of wood fire or Velcro being pulled apart. Higher pitch than coarse crackles.
Crackles - Coarse	Described as bubbling, this sound has a lower pitch than fine crackles and tend to linger longer.
Rhonchi	Has a low-pitched wheeze that is continuous for both inhaling and exhaling and low pitched. Often having a snoring, gurgling, or rattle-like quality
Wheeze	Described as adventitious and continuously changing sound.
Wheeze Monophonic	Loud, continuous sounds occurring throughout the respiratory cycle. Constant pitch which creates a musical tone. Tone is lower pitched compared to adventitious breathing sounds.
Stridor	Loud, High-pitched crowing breath sounds heard during inhaling but as the patient gets worse the sound can be heard throughout the respiration period.
Pleural Rubs	Described as creating or grating sounds similar to walking on fresh snow or leather on leather
Pectoriloquy	Having the patient say "1-2-3" a few times and if the voice's high frequency seems dampened it suggest an abnormal lung area
Cavernous	A form of bronchial which is lower in pitch