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<i>Name</i>	DOC-Audio_systems			<i>Effective date</i>	1/3/2026

GIFMI AUDIO SYSTEMS

1 INTRODUCTION

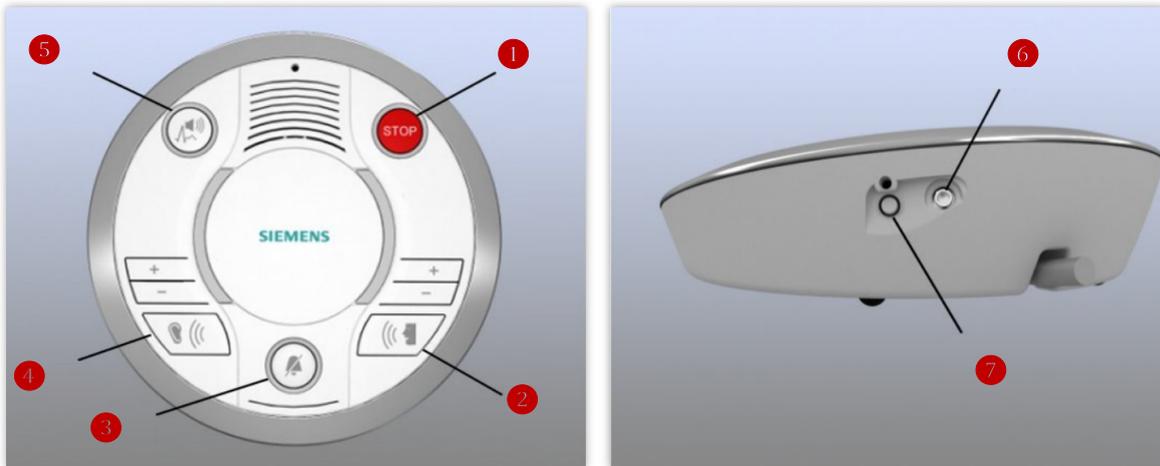
This document describes in brief the use of the available audio systems at the GifMI facility. There are two systems available: Intercom system from Siemens and OptoActive system from OptoAcoustics. For more information, go to the [website](#) or contact the GifMI Site Manager.

2 SIEMENS INTERCOM SYSTEM

2.1 Description

The intercom system allows operators and participants to communicate during the examination. In addition, some important operations like signaling patient alert and stopping the patient table can be managed from the intercom. It also allows to play music in the examination room via the loudspeaker or the headphones. The operating unit of the intercom is located at the scanner workstation.

2.2 The Intercom Unit



#	Button/Connection	Description
1	Stop button	Stop the table movement and the measurement immediately
2	Talk button	Allows speaking to the patient (when holding button press)
3	Reset Patient Alert button	Resets the patient alert
4	Listen button	Enables listening to the patient in the examination room
5	Physio Signal button	Switches the transmission of physiological signals on/off
6	Audio input	3.5 mm jack input from audio source
7	Reset Stop button	Resets the table stop

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2.3 Operating the Intercom

The Intercom system is a half-duplex system which means that only one communication channel is open at the time. This means that it is not possible to talk and listen to the participant simultaneously. The default open channel is **from participant to operator**.

2.3.1 Talking to participant

1. Press **2** to open the communication channel, keep pressed to keep the channel open.
2. Adjust the volume by pressing the + or – buttons.
If the buttons are pressed for about one second, the volume increases/decreases until the button is released.
This is the volume for the participant.

2.3.2 Listening to participant

1. If applicable, release **2** to open the communication channel.
2. Press **4** to open the communication channel, releasing the button will have no effect.
3. Adjust the volume by pressing the + or – buttons.
If the buttons are pressed for about one second, the volume increases/decreases until the button is released.
This is the volume for the operator.

2.3.3 Transmitting music

1. Connect a suitable cable from the audio source (stimulus PC, smartphone, computer, ...) to the audio input connector **6**.
2. Start the music at the audio source.

2.3.4 Patient alert

Participants may use the squeeze bulb to alert the operating personnel (patient alert):

- Acoustically
 - Continuous tone over the intercom
 - Brief feedback signal via the participant's headphones and loudspeaker in the examination room
- Visually:
 - Blinking button on the intercom
 - Message on the Dot display in the examination room

The alert can be reset by pressing the **Reset Patient Alert** **3** or the **Talk** button **2** on the intercom. Alternatively, the alert reset is possible at the control unit in the examination room.

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2.4 Available headset systems

The Siemens Intercom system is equipped with two different headsets.

2.4.1 Slimline headset



This headset is not useable in the 64-channel head coil.



This system must be used in combination with the available earplugs!

2.4.2 Magnacoustics MagnaCoil



This system can be used in combination with any coil, especially the head coils.

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The system **MUST** be used with the provided MagnaPlugs.



The MagnaPlug is very expensive. Please do not spill any plugs and if a participant needs to return for another scanning session, ask them to reuse the plugs.

1. Connect the plugs to the MagnaCoil by pushing the red tube on the MagnaPlug in the receiving red part of the MagnaCoil.
2. Let the participant roll an earplug between thumb and index finger.
3. Let the participant push gently the earplug in the ear canal by pushing the receiving red part of the MagnaCoil.
4. Check if the plug is inserted far enough in the ear canal otherwise there is no noise suppression.

2.4.3 Connecting to table

Both the Slimline headset and the MagnaCoil connect to the patient table in the scanner room. The connector is located at the base of the patient table (red arrow).



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3 OPTOCACOUSTICS OPTOACTIVE SYSTEM



This system can be used in combination with any coil, especially the head coils.



This system must be used in combination with the available earplugs!



The user manual of this device can be downloaded on the [GifMI website](#).

The OptoActive system is a half-duplex system which means that only one communication channel is open at the time. This means that it is not possible to talk and listen to the participant simultaneously. The default open channel is **from participant to operator**.

3.1.1 Talking to participant

The system is equipped with two microphones. The instructions below are valid for both microphones.

1. Press **3** to open the communication channel, keep pressed to keep the channel open.
2. Adjust the volume by turning the right knob (see user manual).

3.1.2 Listening to participant

1. If applicable, release **3** to open the communication channel.
2. Adjust the volume by turning the right knob (see user manual).

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3.1.3 Transmitting music

1. Connect a suitable cable from the audio source (stimulus PC, smartphone, computer, ...) to the audio input connector (see user manual).
2. Start the music at the audio source.

3.1.4 Tips

- Make sure that the large button **1** in the front is pressed and locked! If not, the participant will not hear the operator. Use only button **3** to talk to the participant
- Position the headphones on the participant and be sure to use pads or paper towels to take up the extra space between the headphones and coil (this is especially important for active noise cancellation).
- This system can be used together with the Siemens Intercom system. Use both systems simultaneously to have full-duplex communication.
- To reboot the system, turn off the power switch on the back of the console – wait at least 20s – then turn it back on
- Read the manual on the [GifMI website](#).

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4 TRANSMITTING MUSIC

All audio systems support audio input from an external source.

The necessary cabling has been installed to switch audio sources in a flexible way.



#	Button/Connection	Description
①	Audio output from stimulus PC	Permanent cable running from the stimulus PC. Please do not remove this cable!
②	Audio input to audio system	This connector should be plugged in one of the available audio systems.
③	2-way audio splitter	Splits the audio signal from the stimulus PC
④	Signal 1	Signal from stimulus PC
⑤	Signal 2	Signal from stimulus PC

4.1 Connect audio source to Siemens Intercom system



Connect ② to the audio input as described above.

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4.2 Connect audio source to OptoActive system



Connect **2** to the audio input as indicated.

4.3 Check audio from stimulus PC



To check the audio stimuli generated by the stimulus PC, connect a headset to the unused connector **5** the audio splitter.

4.4 Connect an alternative audio source



To connect an alternative audio source to an audio system, unplug the cable at **4** and connect the cable to the desired audio source.

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5 TIPS

- Talk regularly between scans to let the participant feel comfortable.
- Ask for feedback from the participant. Ask questions who can be answered easily (yes/no, VAS, ...)
- ALWAYS use earplugs additionally to the headset (except for the MagnaPlugs).