

3. VasoGuard RF Remote Control

Remote Control

VasoGuard systems come with a Radio Frequency (RF) remote control transmitter and a USB dongle receiver as standard. The use of a RF remote control helps the user to operate the system whilst away from the keyboard/mouse and touch-screen display panel. The RF remote control is completely wireless and requires no direct line of sight communication with the VasoGuard system (unlike infra-red remote control solutions). The range of the remote control is at least 5 metres.

The remote control draws power from two Alkaline-Manganese AA batteries which should last at least 12 months (based on usage of 200 days per year, eight examinations per day and 100 button presses per examination).

The RF remote control communicates with the VasoGuard system through a small USB dongle which uses one USB connector of the host PC.

All the major functions of the VasoGuard software can be controlled using the remote control unit. The screen cursor can be moved around by using the arrow keys surrounding the Enter button.

A single press of each button will activate that button's assigned feature. Holding down certain buttons will allow the button's feature to step up or down through a range. E.g. holding down the GAIN button + or – will raise or lower the gain continuously until the button is released. The arrow keys will move the mouse in the required direction whilst the corresponding button is held down.

The front face of the VasoGuard remote control is shown in **Figure 1**.



Figure 1: VasoGuard RF remote control



CAUTION

Changes or modifications not expressly approved by Cardinal Health could void the user's authority to operate this remote control equipment.




NOTE: This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Remote Control Button Terminology

The remote control buttons work as follows:

ESC:	Emulates the Esc key on the keyboard and functions as if the user has pressed the Esc function in the VasoGuard software.
WAVE/CNO:	Sets the wave function in the software, or places a Could Not Occlude (CNO) label when required.
MENU:	Opens the software menu.
PREV:	Selects the previous step in an examination protocol.
NEXT:	Selects the next step in an examination protocol.
◀ ▶ ▶ ▼:	Moves the cursor around the monitor screen and will move the highlight around in the software.
ENTER:	Functions as the enter key on the keyboard, and as a left-mouse click when controlling the on screen cursor. Also selects the required function in the software.
🔇:	Mutes and unmutes the sound from the system loudspeakers and headphones.

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- INFLATE/DEFLATE:** Starts and stops the internal pumps which inflate the selected attached cuffs. Also deflates cuffs that are selected and already inflated.
- : Alters the speaker volume. The + side of the button increases the volume whilst the – side decreases sound volume.
- START/FREEZE:** Starts the selected examination mode. If an examination is already running, the button freezes the exam at the moment when the button is pressed.
- SAVE:** Saves the current examination, results and patient information to disk.
- GAIN:** Alters the examination gain. The + side of the button increases the gain whilst the – side decreases the gain.
- SCALE:** Alters the examination window horizontal scale. The + side of the button increases the scale whilst the – side decreases the scale.
- TARGET:** Alters the target pressure value. The + side of the button increases the target value whilst the – side decreases the target value.

VasoGuard Remote Control Batteries

The VasoGuard remote control uses two (2) Alkaline-Manganese AA size batteries in series.



WARNING

Do not use batteries that are damaged, or where the seal is broken or suspected of being broken.



CAUTION

Always replace BOTH batteries. Do not mix new and used batteries in the compartment.

Ensure the battery polarity is correct. The diagram inside the battery compartment shows the required polarity.

Do not expose batteries to heat or excessive sunlight.

If the remote control is not being used for extended periods of time, remove the batteries from the compartment.

Replacing the Remote Control Batteries

If the remote control range seems to be reducing, or if the remote control starts to behave erratically, or not at all, it could be that the batteries need replacing. To replace the batteries the rear cover needs to be removed to reveal the battery compartment. To remove the rear cover, push in the spring clip and lift the cover clear of the locking mechanism. The rear cover can be removed completely.

Remove the batteries and replace with two (2) AA Alkaline-Manganese batteries ensuring the polarity of the batteries is correct. Replace the cover and ensure that the locking mechanism is secure.



Figure 2: VasoGuard RF remote control showing open back and battery compartment