



Different Thinking for
Better Healthcare.®

Attaching the VitalEEG™ Headset to a Patient

Quick Reference Guide

Version 1

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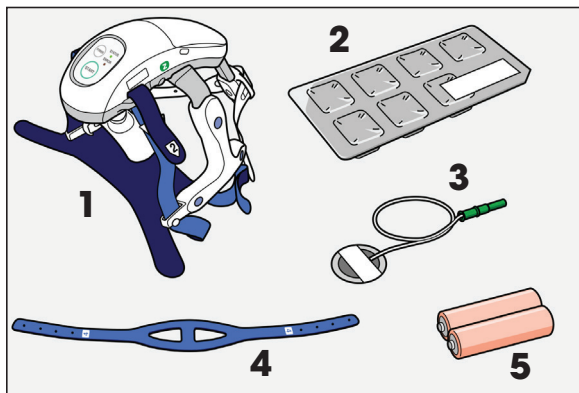


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This guide is intended to only act as a quick reference for attaching the EEG headset to a patient.

This document is for quick reference only. Please refer to the operator's manual for further details. For 24/7 technical support, call (800) 325-0283 and then follow the prompts.

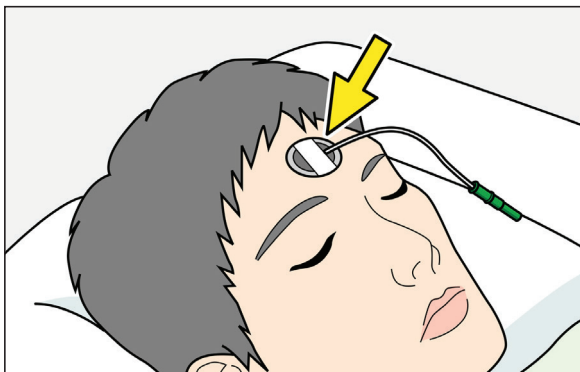
VitalEEG Headset



**Gather the necessary items
for acquisition.**

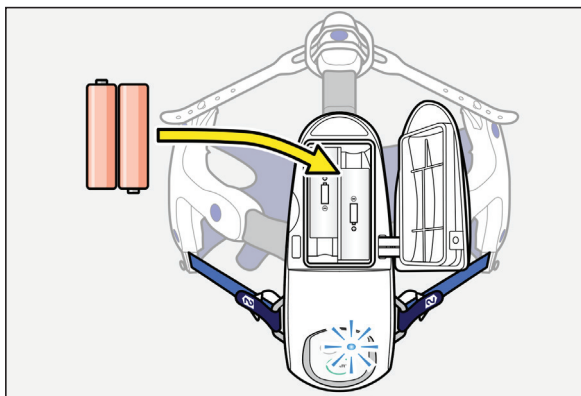
- 1.** VitalEEG Headset
- 2.** (Seven) Disposable Electrodes
- 3.** Ground (Z) Electrodes
- 4.** Reusable Chin Belt
- 5.** (Two) "AA" Alkaline Batteries

STEP 1



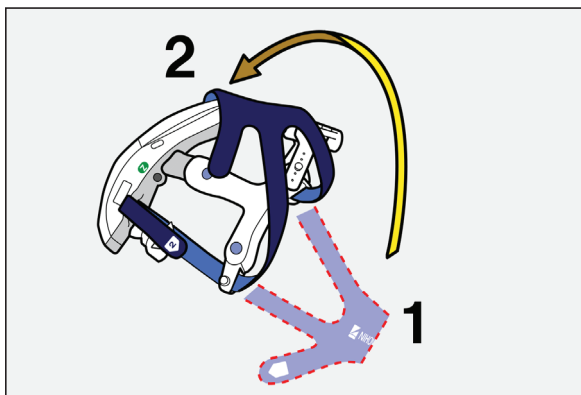
Attach the Ground (Z) electrode to the forehead.

STEP 2



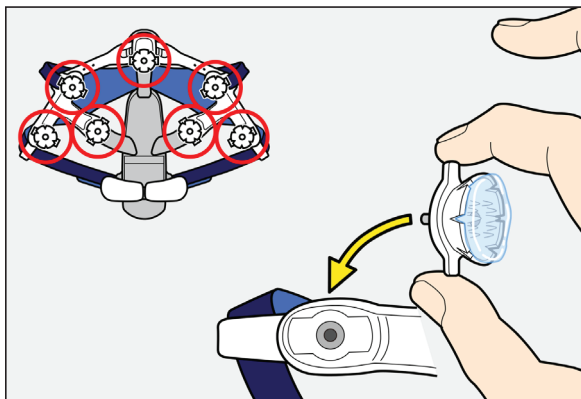
Insert batteries and check that the status LED lights blue.

STEP 3



Loosen all the belts, and then hang the rear belt on the rear arm.

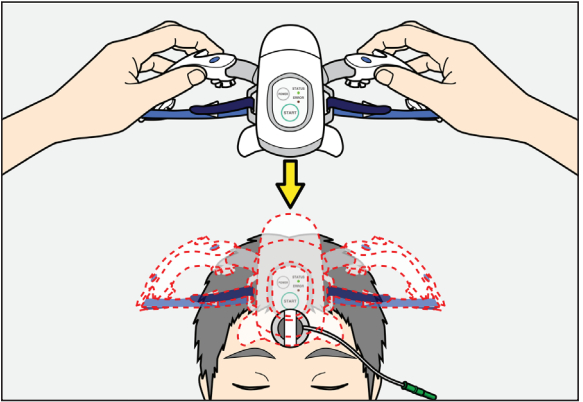
STEP 4



Attach all the electrodes to the EEG headset.

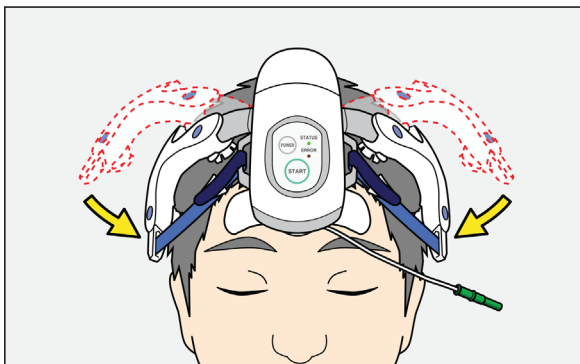
Do not touch the electrode gel.

STEP 5



Spread the side arms of the EEG headset and put the forehead pad on the Ground (Z) electrode.

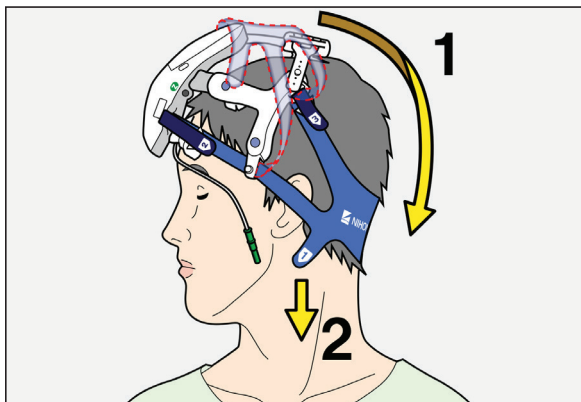
STEP 6



Fold the side arms and attach the electrodes to the scalp.

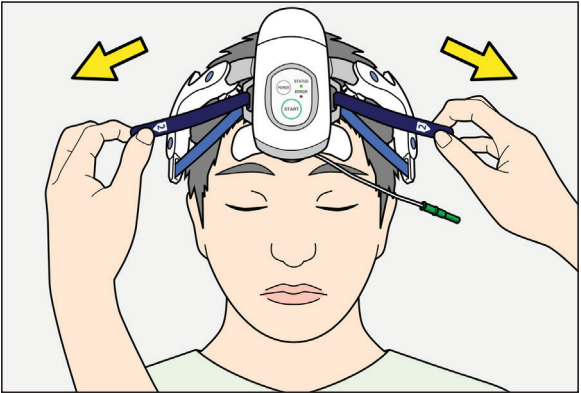
Do not spread the electrode gel on other electrode areas.

STEP 7



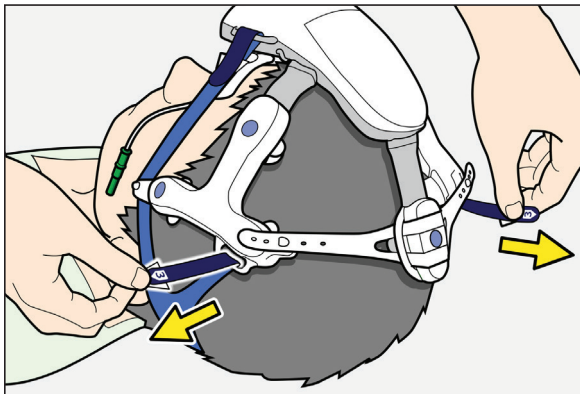
1. Turn the patient's head sideways and slide the rear belt over the back of the head.
2. Slide the tab 1 belt to the neck.

STEP 8



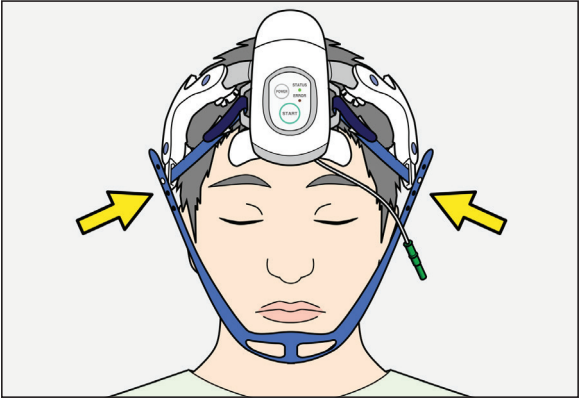
Firmly fasten the tab 2 belt, but do not make it too tight.

STEP 9



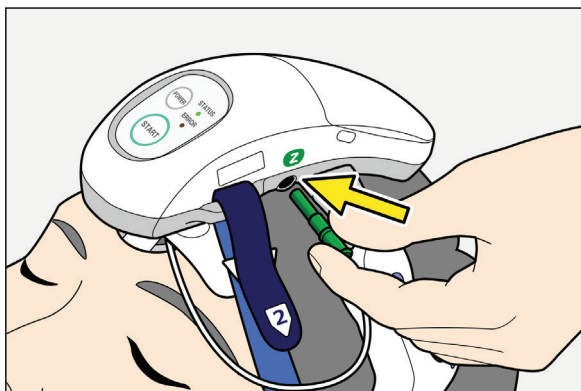
Firmly fasten the tab 3 belt, but do not make it too tight.

STEP 10



Attach the chin belt.

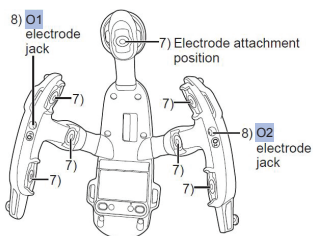
STEP 11



Connect the Ground (Z) electrode cable to the EEG headset.

You are now ready to start acquisition.

Attaching the Optional EEG Disk Electrodes



Attach the NE-118A EEG disk electrodes when measuring EEG on the occipital region.

NOTE: Do not use unspecified electrodes.

1. Attach the disk electrode with white lead to the O1 position on the patient's head. Use Elefix EEG paste to attach the electrode.
2. Attach the disk electrode with red lead to the O2 position in the same way.
3. Connect the white electrode lead to the O1 electrode jack and the red electrode lead to the O2 electrode jack.



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Acquiring an EEG Examination

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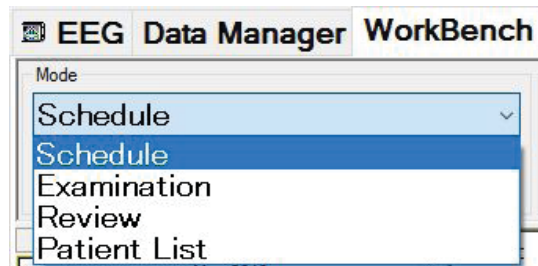


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Acquiring an EEG Examination

Select the NeuroWorkbench® icon from the Windows desktop to start a patient examination.

Click the **[WorkBench]** tab, then select **[Schedule]** from the mode drop down list.




Check that the correct calendar day is selected, then click **[New Schedule]**  .

Enter patient information and click **[OK]**.

**ID and Patient Name are required fields.*

Highlight the patient and click **[Examination]**  ; the Select Protocol box will appear.

Click to select the desired protocol.

The examination will open in calibration mode, and the patient information window will be displayed. Additional patient information can be entered at this time, or you can return to this window later by clicking the **[Patient Information]**  button. Click **[OK]** to save and close this window.

Depending on the selected protocol, the digital video window will automatically appear.

Recording the Exam

Click on the **[Start]**  button.

A pop-up window will appear, asking if you would like to start long-term monitoring. Select **[Yes]** to confirm. This applies to both routine and long-term studies.

Impedance Check

At beginning of the recording, the impedance check window will appear.


Any electrodes that are over the set impedance threshold will appear in **RED**. Electrodes that are under the impedance threshold will appear in **BLUE**.

An impedance check can be performed at any time by clicking the **[Impedance]**  button.

The reference electrodes for the JE-921 amplifier are C3/C4. The impedance reference channels are A1/A2 or FP1/FP2. The ground electrode is X. If all impedances are reading over the set threshold, check the connection of these electrodes first.

The reference electrode for the VitalEEG Headset is CZ.

EEG Waveforms

To begin recording EEG waveforms, click on the **[EEG Signal]**  button.

Selecting Filters and Patterns

Use the drop-down lists to select the Sensitivity, Low Frequency Filter, High Frequency Filter, and Pattern (Montage) to be applied to the examination.

Sens	LF	HF	Pat
7 uV ▾	1.0 Hz ▾	70 Hz ▾	DIG CA ▾

EEG Toolbar



Remote Scope: Launches the EEG scope window in a split screen to allow for review of the recording. To close EEG Scope, click **[File]** and **[Exit]**; the recording window will resume to full screen.



AC Filter: Turns the notch or AC filter on or off to reduce 60 Hz electrical interference.



Display Pattern Table: Opens the pattern table window to allow changes to be made to the patterns (montages). Once changes are made, click **[OK]** to apply the changes to the current exam.



Impedance Check: Click and hold this button for 3 seconds to perform an impedance check at any time.



Calibration: Displays calibration waveforms.



EEG Signal: Displays EEG waveforms.



Reset: Returns all waveforms to the baseline position. Reset on or Reset off will appear at the bottom of the screen, and the waveforms will go flat as the amplifier is being reset.



Freeze: Suspends the waveform display; waveforms are still being recorded.



Patient Information: Opens the patient information dialogue box.



Activation Display: Displays or hides the activation bar.

Adding Annotations/Notes

The screenshot shows a dialog box titled "Annotation". It contains the following elements:


- Manual Input:** A text input field and a checkbox labeled "Keep preset".
- Annotation table:** A checkbox labeled "Sort" and a scrollable list of annotations: Eyes open, Eyes closed, Awake, Drowsy, Asleep, Eye Movement, Movement, Good Effort, Fair Effort, Poor Effort, Look Here, Swallow, Yawn, Snore, and Talking.
- Buttons:** "Modify", "OK", and a yellow sticky note icon.

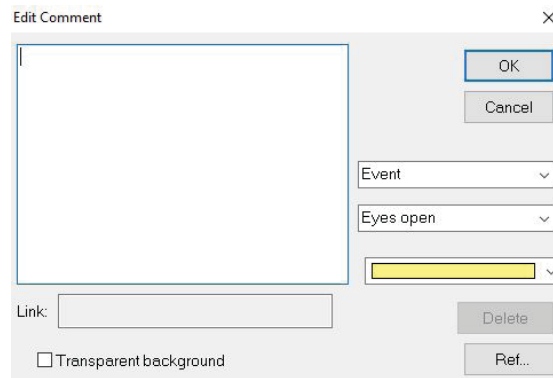
Three different methods are available to add annotations to the exam.

Method 1: Simply begin typing and the lower annotation field will appear. Select **[First key]** to place the annotation in the exam at the time of the first key stroke or select **[Enter]** for the annotation to be placed in the exam once the 'Enter' key is pressed on the keyboard.

Method 2: Select a preset annotation located on the bottom event bar. It will be added to the exam at the time the annotation is selected. Click **[Next]** to view additional preset annotations.

Method 3: Right click on the EEG exam display where the annotation is to be placed. This will open the annotation window and hold that place in the exam until you select an annotation from the list or type a note and click **[OK]**.

For a post-it note type annotation, click the **[Screen Comment]**  button in the bottom left corner of the annotation window. Manual comments or pre-selected annotations can be entered from the annotation box.




Click on the drop-down arrow to select different colors, which can be used to associate with different types of clinical activity (e.g., patient care, events).

Select the transparent background box to apply the color only to the border of the annotation box.

Once all selections are complete, click **[OK]** to confirm.

Digital Video (DV) Camera Viewing Window

The camera viewing window can be minimized or closed without stopping the DV recording. If the DV viewing window is closed, it can be opened by clicking on the video camera  button in the Windows taskbar; this will open the DV recording window. Click on the DV viewing window icon. Closing the DV recording window will stop the DV from recording.

DV Camera Controls

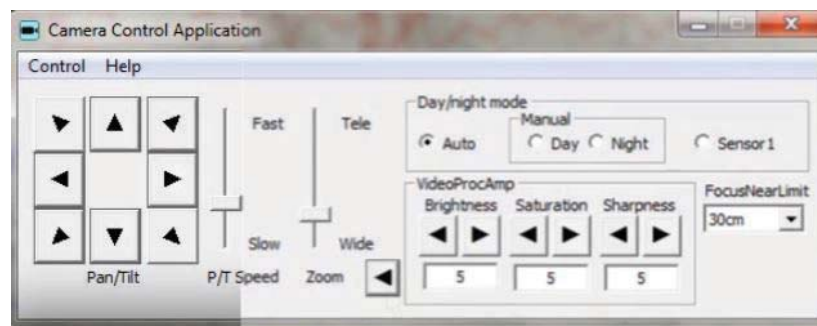
To open the Camera Controls, click on **[Camera Controls]** or **[PTZ Controls]** from the Window menu.

Select the arrows to move the camera up, down, left, right or in a diagonal direction.

The “P/T Speed” slider bar allows for control of the speed at which the camera will move; slide up for faster and down for slower.

The “Zoom” slider bar allows for zooming the camera in or out. Slide up to zoom in and down to zoom out.

Click the arrow icon in the bottom right hand corner to view additional camera options.



Performing Activations



Click the **[Sel]** button to toggle the selection between photic stimulation (PS) and hyperventilation (HV).


Photic Stimulation (PS): Select the **[Start]** button from the activation bar to initiate the selected photic setup.

To stop PS, click the **[Stop]** button from the activation bar; this will pause the photic run. To continue the photic run, click **[Start]**. To start PS from the beginning, click **[Reset]**, then click **[Start]**.

To run a single photic frequency, click on the “Mode” drop-down list, select **[Manual]**, then click on the “Freq” drop-down list and select the desired frequency to run. Click **[Start]** to begin the photic activation.

Hyperventilation (HV): Click **[Start]** to begin the HV timer. Once complete, the timer will automatically switch to post HV.

Stopping the Recording

Once the exam is complete, click the **[Stop]**  button. A pop-up window will appear to confirm that you wish to stop the recording. Click **[Yes]**.