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| **Operating the AccuVein AV400**  |
| **Purpose** | This procedure provides instructions for OPERATING THE ACCUVEIN AV400. |
| **Policy Statements** | The AccuVein® AV400 is a portable, hand-held instrument that helps medical professionals to locate certain superficial veins. It is intended to be used as a supplement to appropriate medical training and experience. The AV400 should not be used as the sole method for locating veins, and should be used only by a qualified medical professional, who should do so either prior to palpitation to identify the location of a vein, or afterwards to confirm the perceived location of a vein. |
| **Principle** | The AV400 operates by using infrared light to detect veins beneath the skin, then projecting the position of the veins on the skin surface directly above the veins.  |
| **Materials** | **Equipment** |
|  | AccuVein® AV400 |
|  | AccuVein® AV400 Charging Cradle |
|  | AccuVein® AV400 Hands-free Stand |
| **Procedure** | Follow the activities in the table below to Operating the AccuVein® AV400.  |
|  | **Step** | **Action** |
|  | 1 | **Positioning the AV400**Hold the device from 4-18” (10 to 45 cm) over the surface of the skin. Scan the area of interest to view. Once a vein is selected, make sure the vein display light is centered directly above the vein’s center line. Don’t move or tilt the device to either side of the vein or this will offset the projected vein from its true location beneath the skin. |
|  | 2 | **Blue button**Press the on/off button to power on or off the AV400. This is the blue button on the left side of the AV400. Press the blue button to power on the AV400 and turn on the vein display light. Wait 3 seconds. Press the button again to turn the vein display light off. This leaves the device on so you can navigate the device settings. |
|  | 3 | **Time-out setting**The time-out setting determines the amount of time until the vein display light turns off. This setting may help increase battery operation time of the AV400. To set the time, press the left button to go into the time-out menu. The time out can be set to 0 (no time-out), 2 minutes, 5 minutes, or 15 minutes. |
|  | 4 | **Inverse setting:**The inverse setting inverts the dark (shadow) and light (red) projection areas of the AV400 such that the veins can be depicted by either light or dark. Changing the inverse setting may improve vein visibility and eye comfort level. |
|  | 5 | Causes for less than optimal or lack of vein display include, but are not limited to, vein depth, skin conditions (e.g., eczema, tattoos), hair, scarring or other highly contoured skin surface, and adipose (fatty) tissue. The AV400 projection may not display veins if operated under bright light such as bright sunlight.If hair (color mid-black to black) is a problem, wet hair and back-comb the hair to stand on-end to allow the light to go between the hairs. |
|  | 6 | The AV400 requires no routine or preventative maintenance. |
|  | 7 | **Cleaning and Disinfecting**1. Users should inspect the AV400 and clean and disinfect the AV400 before each use.
2. Use alcohol wipes or any soft lens wipe with several drops of 70% isopropyl alcohol. Dirt or scratches on the vein display window show up as dark shadows in the vein projection.
3. To clean the body of the AV400 and its charging cradle, you may use a cloth moistened with 70% isopropyl alcohol, a 10% dilution of chlorine bleach in distilled water, or soap and water. You can also use a Sani-wipe (use alcohol in window after to remove Sani-wipe residue).
4. **Do not** immerse the AV400, the charging cradle, or the hands-free stand in liquid or get the components wet such that liquid spills off. Do not attempt to sterilize with heat or pressure sterilization methods.
5. **Do not** clean the AV400 while in the charging cradle or hands-free stand.
6. **Do not** clean the AV400 when the battery cover is removed.
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|  | 8 | **Warnings**1. Do not shine vein display light in eyes.
2. Blink reflexes can be inhibited or reduced by disease, drugs, or other medical conditions. For patients who might have inhibited or reduced bright light blink reflexes, utilize a protective eye shield.
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| **References** | AccuVein® AV400 User Manual. © AccuVein Inc. 2013. AccuVein Inc. 40 Goose Hill Road Phone: (816)997-9400, Cold Spring Harbor, NY 11724. [www.accuvein.com](http://www.accuvein.com) |