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Safety Instructions

User Profile

Trained health care professionals are the intended users of the Lite. Users of the system require clinical judgment and experience to review and interpret the patient data transmitted by the system.

Notes, Cautions and Warnings

Pertinent information in red boldfaced type can be found throughout this Reference Manual and should be interpreted in the following context:

**NOTE**: Provides supplementary information for facilitating operation of the system.
**CAUTION**: Presents instructions for avoiding damage to the system.
**WARNING**: Disregarding this information may prove hazardous to the safety of a person near the InTouch Lite.

Safety Symbols

Symbols appearing on labels on the Lite include the following:

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>!</td>
<td>Attention—Consult accompanying documents for description of intended use.</td>
</tr>
<tr>
<td>⚠️</td>
<td>Warning Dangerous Voltage—Touching exposed contacts may cause electrical shock. Safety features designed into device do not allow exposed live AC contacts.</td>
</tr>
<tr>
<td>📣</td>
<td>Wireless Transmitter Notification—Non-ionizing electromagnetic radiation. This device communicates over the 802.11a/g/n standard for wireless communication.</td>
</tr>
<tr>
<td>⚠️</td>
<td>Avoid the labeled pinch points on the InTouch Lite, especially when operating the lifting mechanism.</td>
</tr>
<tr>
<td>⚠️</td>
<td>Type B Applied Part—Type B. A Type B piece of equipment is one that provides a particular degree of protection against electric shock, particularly regarding allowable leakage current and reliability of the protective earth connection (grounding).</td>
</tr>
<tr>
<td>📣</td>
<td>Type BF Applied Part—Type BF applied part. This product meets the safety requirements of IEC 6061-1-1 for BF protection using a medical grade power supply providing 9 Vdc – 12 Vdc at maximum of 600 mA.</td>
</tr>
<tr>
<td>📖</td>
<td>Refer to the instruction manual/booklet. Operating Instructions are contained in a separate instruction manual.</td>
</tr>
</tbody>
</table>
Safety Instructions

Electromagnetic Compatibility

The InTouch Lite system complies with IEC 60601-1-2, General Requirements for Safety—Collateral standard: Electromagnetic compatibility. Performance of the device is unaffected by exposure to the compliance levels described in Tables 1,2,3 and 4 in the following section.

Special precautions and installation information for the Lite for electromagnetic compatibility (EMC) are provided below:

- Equipment in hospital environments, including the Lite and other portable or mobile communications equipment, can produce Electromagnetic Interference (EMI), which may affect the function of these devices. Such effects are prevented by use of equipment with EMI characteristics proven below recognized limits, as identified in the tables below.

- In the event of suspected interference from other equipment, which prevents the proper functioning of the Lite, contact InTouch Health and/or discontinue use of the system until the problem can be remedied.

The following tables contain the Manufacturer's declaration and additional information required by IEC 60601-1-2.

Table 1: InTouch Lite Guidance and Manufacturer's Declaration - Electromagnetic Emissions

<table>
<thead>
<tr>
<th>Emissions Test</th>
<th>Compliance</th>
<th>Electromagnetic Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF Emissions CISPR 11</td>
<td>Group 1</td>
<td>The Lite uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.</td>
</tr>
<tr>
<td>RF Emissions CISPR 11</td>
<td>Class A</td>
<td>The Lite is suitable for use in all establishments other than domestic and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.</td>
</tr>
<tr>
<td>Harmonic Emissions IEC 61000-3-2</td>
<td>Class A</td>
<td></td>
</tr>
<tr>
<td>Voltage Fluctuations / Flicker Emissions IEC 61000-3-3</td>
<td>Complies</td>
<td></td>
</tr>
</tbody>
</table>
Safety Instructions

Table 2: Guidance and Manufacturer's Declaration - Electromagnetic Immunity

The InTouch Lite system is intended for use in the electromagnetic environment specified below. The customer or the user of the InTouch Lite should assure that it is used in such an environment.

<table>
<thead>
<tr>
<th>Immunity Test</th>
<th>EC 60601 Test Level</th>
<th>Compliance Level</th>
<th>Electromagnetic Environment - Guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrostatic Discharge (ESD)</td>
<td>±6 kV Contact</td>
<td>±6 kV Contact</td>
<td>Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.</td>
</tr>
<tr>
<td>IEC 61000-4-2</td>
<td>±8 kV Air</td>
<td>±8 kV Air</td>
<td></td>
</tr>
<tr>
<td>Electrical Fast Transient / Burst</td>
<td>±2 kV for Power Supply Lines</td>
<td>±2 kV for Power Supply Lines</td>
<td>Mains power quality should be that of a typical commercial or hospital environment.</td>
</tr>
<tr>
<td>IEC 61000-4-4</td>
<td>±1 kV for Input / Output Lines</td>
<td>±1 kV for Input / Output Lines</td>
<td></td>
</tr>
<tr>
<td>Surge</td>
<td>±1 kV Line(s) to Line(s)</td>
<td>±1 kV Line(s) to Line(s)</td>
<td>Mains power quality should be that of a typical commercial or hospital environment.</td>
</tr>
<tr>
<td>IEC 61000-4-5</td>
<td>±2 kV Line(s) to Earth</td>
<td>±2 kV Line(s) to Earth</td>
<td></td>
</tr>
</tbody>
</table>
| Voltage Dips, Short Interruptions, and Voltage Variations on Power Supply Input Lines | <5% \( U_T \) (>95% dip in \( U_T \)) for 0.5 cycle  
40% \( U_T \) (60% dip in \( U_T \)) for 5 cycles  
70% \( U_T \) (30% dip in \( U_T \)) for 25 cycles  
<5% \( U_T \) (>95% dip in \( U_T \)) for 5 sec | <5% \( U_T \) (>95% dip in \( U_T \)) for 0.5 cycle  
40% \( U_T \) (60% dip in \( U_T \)) for 5 cycles  
70% \( U_T \) (30% dip in \( U_T \)) for 25 cycles  
<5% \( U_T \) (>95% dip in \( U_T \)) for 5 sec | Mains power quality should be that of a typical commercial or hospital environment. If the user of the Lite requires continued operation during power mains interruptions, it is recommended that the Lite be powered from an uninterruptible power supply or a battery. |
| IEC 61000-4-11                                    |                             |                            |                                                                                |
| Power frequency (50/60 Hz) Magnetic Field         | 3 A/m                       | 3 A/m                      | Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment. |
| IEC 61000-4-8                                     |                             |                            |                                                                                |

\( U_T \) is the a.c. mains voltage prior to application of the test level.
## Safety Instructions

### Table 3: Guidance and Manufacturer's Declaration - Electromagnetic Immunity

The InTouch Lite is intended for use in the electromagnetic environment specified below. The customer or the user of the InTouch Lite should assure that it is used in such an environment.

<table>
<thead>
<tr>
<th>Immunity Test</th>
<th>EC 60601 Test Level</th>
<th>Compliance Level</th>
<th>Electromagnetic Environment - Guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conducted RF</td>
<td>3 Vrms 150 kHz to 80 MHz</td>
<td>3 Vrms 150 kHz to 80 MHz</td>
<td>Portable and mobile RF communications</td>
</tr>
<tr>
<td>IEC 61000-4-6</td>
<td>3 V/m 80 MHz to 2.5 GHz</td>
<td>3 V/m 80 MHz to 2.5 GHz</td>
<td>equipment should be used no closer to</td>
</tr>
<tr>
<td>Radiated FR</td>
<td></td>
<td></td>
<td>any part of the Lite, including</td>
</tr>
<tr>
<td>IEC 61000-4-3</td>
<td></td>
<td></td>
<td>cables, than the recommended</td>
</tr>
</tbody>
</table>
<pre><code>                                                                                       | separation distance calculated        |
                                                                                       | from the equation applicable to the   |
                                                                                       | frequency of the transmitter.         |
                                                                                       | **Recommended separation distance:** |
                                                                                       | \[d = 1.2 \sqrt{P}\] \hspace{1cm} 80 MHz to 800 MHz |
                                                                                       | \[d = 1.2 \sqrt{P}\] \hspace{1cm} 800 MHz to 2.5 GHz |
                                                                                       | \[d = 2.3 \sqrt{P}\]                 |
                                                                                       | where \(P\) is the maximum output     |
                                                                                       | power rating of the transmitter in    |
                                                                                       | watts (W) according to the           |
                                                                                       | transmitter manufacturer and \(d\) is  |
                                                                                       | the recommended separation distance    |
                                                                                       | in meters (m). Field strengths from   |
                                                                                       | fixed RF transmitters, as determined  |
                                                                                       | by an electromagnetic site survey,    |
                                                                                       | should be less than the compliance    |
                                                                                       | level in each frequency range.        |
                                                                                       | Interference may occur in the vicinity |
</code></pre>
                                                                                           | of equipment marked with the following symbol:

**NOTE 1:** At 80 MHz and 800 MHz, the higher frequency range applies.

**NOTE 2:** These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

a. Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast, and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the Lite is used exceeds the applicable RF compliance level above, the Lite should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the InTouch Lite.

b. Over the frequency range 150 kHz to 80 MHz, field strengths should be less than [V1] V/m.
Safety Instructions

Table 4: Recommended separation distances between portable and mobile RF communications equipment and the InTouch Lite.

The InTouch Lite is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the InTouch Lite can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the InTouch Lite as recommended below, according to the maximum output power of the communications equipment.

<table>
<thead>
<tr>
<th>Rated Maximum Output Power of Transmitter (W)</th>
<th>Separation distance according to frequency of transmitter (m)</th>
<th>150 kHz to 80 MHz</th>
<th>80 MHz to 800 MHz</th>
<th>800 MHz to 2.5 GHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.01</td>
<td>d = 1.2√P</td>
<td>0.12</td>
<td>0.12</td>
<td>0.23</td>
</tr>
<tr>
<td>0.1</td>
<td>0.38</td>
<td>0.12</td>
<td>0.38</td>
<td>0.73</td>
</tr>
<tr>
<td>1</td>
<td>1.2</td>
<td>1.2</td>
<td>1.2</td>
<td>2.3</td>
</tr>
<tr>
<td>10</td>
<td>3.8</td>
<td>3.8</td>
<td>7.3</td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>12</td>
<td>12</td>
<td>23</td>
<td></td>
</tr>
</tbody>
</table>

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies. NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

InTouch Lite Warnings

- The Lite is designed to utilize the 802.11x communication protocol as well as the public internet in order to achieve its intended purpose. Failures in either of these supporting systems could cause a complete loss of communication between the Provider Access Software and the Lite. Consequently, the Lite should not be utilized in any activities where successful completion of the activity is dependent upon uninterrupted communication between the Lite and the Provider Access Software.

- A tested backup method of communication should be made available in case the network communication is lost.

- To ensure proper operation, users should be thoroughly familiar with the InTouch Telehealth System. Study of this Reference Manual is essential to ensure proper operation. In addition, completion of proper training by an InTouch Health Representative is required for safe operation. All questions should be referred to the local InTouch Health Sales Representative or InTouch Health Technical Service.

- Do not attempt to open or remove any parts of the Lite. To reduce the risk of electric shock, do not remove the cover.
Safety Instructions

- The Lite is not MRI (Magnetic Resonance Imaging) safe and is not MRI compatible. The InTouch Lite should only be used in locations where the presence of metal is not controlled.

- Flammable Anesthetics: The Lite is not suitable for use in the presence of flammable anesthetic mixture with air, or in the presence of a flammable anesthetic mixture with oxygen or nitrous oxide.

- There are no user-serviceable components inside. Refer servicing and repair to qualified personnel only.

- In the event that any interior compartment or part of the Lite is to be accessed (such as inside the battery compartment, etc.), position the unit such that the power cord can be accessed. Unplug the device from the power receptacle (supply mains) before proceeding.

- The Lite must be plugged into a grounded “Hospital Grade” electrical outlet to minimize the risk of electrical shock during the battery charging cycle.

- If the power plug of the Lite is damaged, the Lite can be operated using the onboard battery system. However this condition should be reported to Technical Service immediately for repair.

- The Lite contains sealed, rechargeable, lead-acid, gel-type batteries. The InTouch Lite should always be plugged in to avoid deep discharge cycles that can shorten the battery's useful life. Other than keeping the batteries charged by keeping the Lite plugged in, no user maintenance of the batteries is required.

- Provide adequate ventilation. The Lite may overheat if powered on or plugged in and charging while stored for extended periods in an area without adequate ventilation.

- Leakage current from interconnected electrical equipment may exceed safe levels. In order to maintain patient and user safety, it is important to interconnect only with devices in compliance with IEC 60601-1-1 requirements. It is the responsibility of the user to ensure that any interconnected equipment not supplied by InTouch Health maintains compliance with IEC 60601-1-1 requirements.

- The video images transmitted to and displayed on the Lite and Provider Access Software may not contain all of the information in the original scene. Video information from the camera is captured, compressed, transmitted, and redisplayed remotely at a different resolution. As a result information in the original scene may be lost.

- Color reproduction in the transmitted video is not guaranteed. Color reproduction in a video system is a complicated combination of lighting, cameras, and display technology. It should not be assumed that the colors on the display are an exact replication of the actual colors in the scene.

- Clinical judgment and experience are required to review and interpret images and information transmitted via the Lite and the Provider Access Software.
Safety Instructions

InTouch Lite Cautions

- Adding third party software or hardware to the Lite may cause it to malfunction or operate erratically. Excluding those devices designed for connection through existing hardware ports, InTouch Health does not support the addition of third party software or hardware to the Lite. Please check with Technical Service PRIOR to installing any other third party devices.

- To ensure system readiness, connectivity, and charged batteries, power on the Lite at least two hours before its intended use. This will allow the Lite to check for and install any available software updates.

- When powering down the Lite for any reason, always ensure that the Button Panel Power button is powered off first and that the Lite Display screen turns off (goes to black, approximately 30-45 seconds) before turning off the Main power.

- When cleaning the Lite, do not immerse the Lite as it contains sensitive electronics. Wipe down the surfaces as specified in the Cleaning and Maintenance section of this Reference Manual. Do not allow any cleaning solution inside the Lite. Avoid excess solution which may enter the Lite through its openings.

- Do not pull on peripheral cabling attached to the Lite. Cables may break, especially near the junction points with the Lite.

- Do not leave video equipment connected to the Auxiliary Video Inputs. The equipment and/or the Lite may be damaged if the Lite is moved with equipment connected to an Input.
The InTouch Health Remote Presence System is a telecommunications platform that enables an individual to “be in two places at once.” Telehealth is the ability to project yourself to another location (without leaving your current location) and to see, hear, and talk as though you were actually there. An InTouch System is comprised of Provider Access and Patient Access (InTouch Devices). The Provider Access and Patient Access are linked via the Internet over the secure InTouch Telehealth Network. With Provider Access devices, a physician can access designated Patient Access devices to visit people in another location. A physician can call on a patient, family members and other staff. Moreover, via Provider Access, the operator may access any web-based information such as hospital electronic medical records (EMR), simultaneously viewing this data while interacting with a person at the remote location. The Patient Access Devices' two-way audio and video communications allow a user to now be remotely available at the point of interaction whenever they are needed. The family of Patient Access devices includes the InTouch 7i™, and InTouch Vita™ which are drivable, free roaming Patient Access Devices that enable complete mobility at the remote site; the cart based InTouch Lite™; the OR based InTouch Vantage™, and the InTouch Xpress™ which offers a portable form factor for flexibility to enable physicians to extend their reach into a broad array of uses ranging from transport, emergency, clinic, and more. The InTouch Lite™ is a FDA Class II cleared device.

About this Manual

This manual contains descriptions of three models of the InTouch Lite™. Any reference to InTouch Lite™ indicates that both models are included; a reference to InTouch Lite V1™ indicates only the original system configuration, and subsequently a reference to InTouch Lite V2™ or InTouch Lite V3 indicates only the newer configurations.

To ensure proper operation, users should be thoroughly familiar with their Provider Access and Patient Access Devices. Study of this Reference Manual is essential. All questions should be referred to the local InTouch Health Sales Representative or InTouch Health Technical Service. Failure to comply with the instructions in this manual may void the InTouch Lite™ warranty.
# InTouch Lite Overview

## InTouch Lite V1 Anatomy and Components

<table>
<thead>
<tr>
<th></th>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Directional Microphone</td>
<td>Used to pickup audio in a narrow zone for Focused Audio mode.</td>
</tr>
<tr>
<td>2</td>
<td>Virtually There Camera/Stereo Microphones (Lite V1 only)</td>
<td>Captures remote video for viewing at the Provider Access Software. Stereo microphones are located on each side of the assembly which are used for the Immersive Audio mode.</td>
</tr>
<tr>
<td>3</td>
<td>Display</td>
<td>Displays Provider Access Software user’s face on the Lite’s head.</td>
</tr>
<tr>
<td>4</td>
<td>Power Cord Shelf Hook</td>
<td>Secures the power cord when moving the Lite to a new location.</td>
</tr>
<tr>
<td>5</td>
<td>Privacy Handset</td>
<td>Used for conversations requiring privacy or understandability in loud environments.</td>
</tr>
<tr>
<td>6</td>
<td>Lite V1 Antennae</td>
<td>Connects the Lite to broadband Internet via 802.11 Wi-Fi (a, b, g, or n).</td>
</tr>
<tr>
<td>7</td>
<td>Handle</td>
<td>Handle for moving the Lite. An optional Handle/Shelf combination is also available to provide for holding a laptop, chart, etc.</td>
</tr>
<tr>
<td>8</td>
<td>Expansion Bay</td>
<td>Holds the connectors for approved USB peripheral devices, Auxiliary Video inputs, and hardwire network. Also supports an Auxiliary AC power receptacle, Stethoscope, and Privacy Handset hardware.</td>
</tr>
<tr>
<td>9</td>
<td>RNK Stethoscope</td>
<td>A feature of the Lite V1 that allows remote auscultation.</td>
</tr>
<tr>
<td>10</td>
<td>Power Plug and Cord</td>
<td>Used to power the Lite and recharge the batteries.</td>
</tr>
<tr>
<td>11</td>
<td>Wheel Locks</td>
<td>Locks the front wheels in place when stationary.</td>
</tr>
</tbody>
</table>
InTouch Lite Overview
InTouch Lite V2 Anatomy and Components

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Directional Microphone</td>
<td>Used to pickup audio in a narrow zone.</td>
</tr>
<tr>
<td>2</td>
<td>Virtually There Cameras</td>
<td>Captures remote video for viewing at the Provider Access.</td>
</tr>
<tr>
<td>3</td>
<td>Display</td>
<td>Displays Provider Access Software user’s face on the Lite’s head.</td>
</tr>
<tr>
<td>4</td>
<td>Power Cord Shelf Hook</td>
<td>Secures the power cord when moving the Lite to a new location.</td>
</tr>
<tr>
<td>5</td>
<td>Privacy Handset</td>
<td>Used for conversations requiring privacy or understandability in loud environments.</td>
</tr>
<tr>
<td>6</td>
<td>Shelf</td>
<td>Shelf for holding a laptop, chart, etc.</td>
</tr>
<tr>
<td>7</td>
<td>Handle</td>
<td>Handle for moving the Lite.</td>
</tr>
<tr>
<td>8</td>
<td>Expansion Bay</td>
<td>Holds the connectors for approved USB peripheral devices, Auxiliary Video inputs, and hardwire network. Also supports an Auxiliary AC power receptacle, Stethoscope, and Privacy Handset hardware.</td>
</tr>
<tr>
<td>9</td>
<td>PCP Stethoscope</td>
<td>A feature of the Lite V2 that allows remote auscultation.</td>
</tr>
<tr>
<td>10</td>
<td>Power Plug and Cord</td>
<td>Used to power the Lite and recharge the batteries.</td>
</tr>
<tr>
<td>11</td>
<td>Wheel Locks</td>
<td>Locks each wheel in place when stationary (four wheels).</td>
</tr>
<tr>
<td>12</td>
<td>Nameplate</td>
<td>Specifies the manufacturer, model, serial number, regulatory body markings, WEEE trash symbol, patent numbers, and power ratings.</td>
</tr>
</tbody>
</table>
### InTouch Lite Overview

#### InTouch Lite V3 Anatomy and Components

<table>
<thead>
<tr>
<th>Number</th>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Directional Microphone</td>
<td>Used to pickup audio in a narrow zone.</td>
</tr>
<tr>
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<td>Virtually There Cameras</td>
<td>Captures remote video for viewing at the Provider Access.</td>
</tr>
<tr>
<td>3</td>
<td>Display</td>
<td>Displays Provider Access Software user’s face on the Lite’s head.</td>
</tr>
<tr>
<td>4</td>
<td>Power Cord Shelf Hook</td>
<td>Secures the power cord when moving the Lite to a new location.</td>
</tr>
<tr>
<td>5</td>
<td>Privacy Handset</td>
<td>Used for conversations requiring privacy or understandability in loud environments.</td>
</tr>
<tr>
<td>6</td>
<td>Shelf</td>
<td>Shelf for holding a laptop, chart, etc.</td>
</tr>
<tr>
<td>7</td>
<td>Handle</td>
<td>Handle for moving the Lite.</td>
</tr>
<tr>
<td>8</td>
<td>Expansion Bay</td>
<td>Holds the connectors for approved USB peripheral devices, Auxiliary Video inputs, and hardwire network. Also supports DVI input, Stethoscope, and Privacy Handset hardware.</td>
</tr>
<tr>
<td>9</td>
<td>Littman Stethoscope</td>
<td>A feature of the Lite V3 that allows remote auscultation.</td>
</tr>
<tr>
<td>10</td>
<td>Power Plug and Cord</td>
<td>Used to power the Lite and recharge the batteries.</td>
</tr>
<tr>
<td>11</td>
<td>Wheel Locks</td>
<td>Locks each wheel in place when stationary (four wheels).</td>
</tr>
<tr>
<td>12</td>
<td>Nameplate</td>
<td>Specifies the manufacturer, model, serial number, regulatory body markings, WEEE trash symbol, patent numbers, and power ratings.</td>
</tr>
<tr>
<td>13</td>
<td>Basket</td>
<td>Holds miscellaneous items.</td>
</tr>
</tbody>
</table>
### InTouch Lite Overview

#### InTouch Lite Button Panel

<table>
<thead>
<tr>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>POWER Button</td>
</tr>
<tr>
<td></td>
<td>Turn the Lite computer On/Off. The Lite should remain ON at all times. This button should only be used when instructed by Technical Support. The Lite will alert you when you press it to confirm that you want to turn OFF the system.</td>
</tr>
<tr>
<td>2</td>
<td>Stop Video Button</td>
</tr>
<tr>
<td></td>
<td>Blocks the video feed from the Lite so that the Provider Access Software no longer receives video.</td>
</tr>
<tr>
<td>3</td>
<td>Volume Control</td>
</tr>
<tr>
<td></td>
<td>Used to adjust the speaker volume.</td>
</tr>
<tr>
<td>4</td>
<td>CONNECT Button</td>
</tr>
<tr>
<td></td>
<td>Not functional.</td>
</tr>
<tr>
<td>5</td>
<td>DISCONNECT Button</td>
</tr>
<tr>
<td></td>
<td>Immediately disconnects all remote users. Ends the active session following a disconnect confirmation prompt.</td>
</tr>
<tr>
<td>6</td>
<td>Check Button</td>
</tr>
<tr>
<td></td>
<td>When not in session, pressing the check button displays information on the Lite and network status.</td>
</tr>
<tr>
<td>7</td>
<td>Speakers</td>
</tr>
<tr>
<td></td>
<td>Play audio from the Provider Access Software.</td>
</tr>
<tr>
<td>8</td>
<td>MUTE Button</td>
</tr>
<tr>
<td></td>
<td>Turns off the microphones so that audio from the Lite is not heard at the Provider Access Software.</td>
</tr>
</tbody>
</table>

### Auxiliary AC Power Receptacle (V1 and V2 only)

The Auxiliary AC Power Receptacle is located under the shelf on the top of the Expansion Bay. The receptacle installed is the standard for the country location to which the Lite is delivered.

This receptacle is rated at:
- InTouch Lite (US) 115VAC, 60Hz, 2.1A
- InTouch Lite (International) 230VAC, 50Hz, 1.7A
**InTouch Lite Basics**

**Adjusting the Height**

The Lite Head can be placed between 58 inches and 78 inches off the floor. Adjusting the head height is slightly different between the Lite V1 and the Lite V2. Refer to the following illustrations for each cart.

**Adjusting the Head Height on InTouch Lite V1**

![Illustration of Lite V1 height adjustment](image1)

1. Lift Handle
2. Move Up or Down

**Adjusting the Head Height on InTouch Lite V2**

![Illustration of Lite V2 height adjustment](image2)

1. Pull Handle straight out
2. Move Up or Down
InTouch Lite Basics
Adjusting the Head Height on InTouch Lite V3

Lift or Lower Head Display

Moves Up and Down to Adjust Height of Vertical Column
InTouch Lite Basics

Moving the InTouch Lite

The Lite is designed to be moved by hospital staff into a broad array of locations ranging from clinics, emergency rooms, rural hospitals, long-term care communities and more. The requirement for operation is a standard grounded AC outlet supplying a minimum of 120 VAC, 60 Hz, 5.1 A (US) or 230 VAC, 50 Hz, 2.7A (International) for the Lite V1 and Lite V2. The requirement is 100-240 VAC, 50/60 Hz, 6.5A (US and International) for Lite V3.

- Ensure the Lite is set at its lowest position.
- Ensure any auxiliary devices attached to the Lite are unplugged.
- Ensure the power cord is unplugged.
- Ensure the wheels are unlocked before moving.
- Exercise caution when encountering thresholds.
- Move to the desired location.
- Lock the wheels.
- Plug in the power cord.

(See Power On Sequence to turn on power.)

Main Power—Recharging the InTouch Lite

The Main Power switch panel is located on the right side of the expansion bay near the Privacy Handset (Lite V1 and V2). The battery charge indicator is located above the Expansion Bay on the Lite V3. The Main Power switch panel contains the main power button, battery charge indicator lights, and the low-power alarm reset button.

The Main Power button turns on the power to the Lite (V1 and V2) and the Auxiliary AC Power Receptacle. If the Lite is not plugged in, the power is provided from the battery.

NOTE: Lite V3 does not have a Main Power switch. All power is integrated and controlled through the Button Panel.

The Battery charge lights will be lit indicating the remaining percentage of battery life whenever the Lite is plugged in or turned on.

If the battery charge drops below the alarm threshold, the soundbyte “Please plug me in” will be played at intervals until the Lite is plugged into AC power. Plug in the Lite as soon as possible.
InTouch Lite Basics

The Lite should be plugged in and left powered on at all times. Plug the Lite into a grounded “Hospital Grade” electrical outlet to minimize the risk of electrical shock during the battery charging cycle.

- The system will charge to 85% in four hours.
- The system will charge to 100% in six hours.

**WARNING:** If the power plug of the Lite is damaged, the Lite can be operated using the onboard battery system. However this condition should be reported to Technical Service immediately for repair.

**WARNING:** The Lite contains sealed, rechargeable, lead-acid, gel-type batteries. The Lite should always be plugged in to avoid deep discharge cycles that can shorten the battery’s useful life. Other than keeping the batteries charged by keeping the Lite plugged in, no user maintenance of the batteries is required.

Power On Sequence (Lite V1 and Lite V2)

The Lite (V1 and V2) have two power buttons:

- the Main Power button on the Expansion Bay that controls power from either the wall plug or the batteries, and
- the Button Panel power button which controls only the computer.

The Lite should be plugged in and left powered on at all times.

1. **Plug in the power cord:**
   Ensure that the power cord is plugged into an approved wall socket.

2. **Turn On the Main Power at the Expansion Bay:**
   Press and hold (3-5 sec.) the main power button.
   Ensure that the power light is lit.

3. **Turn On the Power at the Button Panel:**
   Press the power button once.
   Check to ensure the Display powers up successfully.
   After a period of self-testing (1-2 minutes), the screen as shown below should appear on the Display.

**CAUTION:** To ensure system readiness, connectivity, and charged batteries, power on the Lite at least two hours before its intended use. This will allow the Lite to check for and install any available software updates.
InTouch Lite Basics

Power Off Sequence (Lite V1 and Lite V2)

**NOTE:** Powering off is not recommended unless instructed to do so by InTouch Technical Support.

The Lite (V1 and V2) has two power buttons:

- the Main Power button on the Expansion Bay that controls power from either the wall plug or the batteries
- the Button Panel power button which controls only the computer.

The Lite should be plugged in and left powered on at all times.

**CAUTION:** When powering down the Lite for any reason, always ensure that the Button Panel Power button is powered off first and that the Lite Display screen turns off (goes to black, approximately 30-45 seconds) before turning off the Main power.

1. **Turn Off the Power at the Button Panel:**
   
   Press the power button once.
   
   Check to ensure the Display screen turns off (goes to black, approximately 30-45 seconds).
   
   If the Lite is on Screensaver Mode or the Status Info screen, a confirmation dialog box will ask you to confirm shutdown.
   
   To shutdown, press the **check button**, as instructed on the screen. These instructions must be followed within **seven seconds** to successfully shutdown the Lite.
   
   If you do not press the **check button** within seven seconds, the Lite will assume shutdown was initiated by accident. You will need to wait one minute to re-initiate shutdown.

2. **Turn Off the Main Power at the Expansion Bay:**
   
   Press and hold (3-5 sec.) the main power button.
   
   Ensure that the power light goes off.
InTouch Lite Basics

Power On Sequence (Lite V3)

The Lite should be plugged in and left powered on at all times.

1. **Plug in the power cord:**
   Ensure that the power cord is plugged into an approved wall socket.

2. **Turn On the Power at the Button Panel:**
   Press the power button once.
   Check to ensure the Display powers up successfully.
   After a period of self-testing (1-2 minutes), the screen as shown below should appear on the Display.

   **CAUTION:** To ensure system readiness, connectivity, and charged batteries, power on the Lite at least two hours before its intended use. This will allow the Lite to check for and install any available software updates.

Power Off Sequence (Lite V3)

**NOTE:** Powering off is not recommended unless instructed to do so by InTouch Technical Support.

1. **Turn Off the Power at the Button Panel:**
   Press the power button once.
   Check to ensure the Display screen turns off (goes to black, approximately 30-45 seconds).
   If the Lite is on Screensaver Mode or the Status Info screen, a confirmation dialog box will ask you to confirm shutdown.
   To shutdown, press the **check button**, as instructed on the screen. These instructions must be followed within **seven seconds** to successfully shutdown the Lite.
If you do not press the check button within seven seconds, the Lite will assume shutdown was initiated by accident. You will need to wait one minute to re-initiate shutdown.

InTouch Lite Display

When the Lite is actively connected to Provider Access Software the name of the person logged on to the Lite will be displayed at the bottom of the Lite Display.

When the Lite is NOT actively connected to Provider Access Software, a series of splash screens will appear in rotating sequence.

Adjusting Speaker Volume

To manually adjust the Lite volume:

- The volume is adjusted using the Volume Control buttons, located on the Button Panel.
Stethoscope Feature

InTouch Lite V1 RNK Stethoscope Kit Components

- Stethoscope assembly (pre-mounted on Lite)
- Stethoscope chest piece
- Lite V1 headset
- RNK product documentation

InTouch Lite V1 Stethoscope Operation

On the Lite side, the Stethoscope chest piece is applied to a patient by hospital staff following the physician’s directions (received through normal Lite audio).

**CAUTION:** Do not pull on the cables. Do not pull the Lite using the cables. Cables may break, especially near the junction points with the Lite.

- Assure the Lite is within 8 feet of the patient exam site.
- Put on the Stethoscope headset (if desired).
- Put on gloves.
- Remove the Stethoscope chest piece and disinfect it with a disposable sanitary wipe.
- Expose the patient area and apply the chest piece as directed by the physician.
- Disinfect the chest piece and return it to the hanging bracket on the Lite V1.
- Remove gloves.
- Remove the headset and return it to the hanging bracket on the Lite V1.

InTouch Lite V1 Stethoscope Headset

The use of the headset is optional, and can be used to assist with placement of the chest piece on the patient or as an aid for teaching/mentoring. The Lite V1 headset allows the nurse, resident, fellow, etc. to listen to the Stethoscope while still being able to hear the normal Lite V1 audio and other sounds in the environment.

**NOTE:** The Lite V1 Stethoscope unit, once plugged in, is always “on”.

InTouch Lite V1 Stethoscope Volume Control

It is important to note that local volume controls exist on both Provider Access Software and Lite V1 Stethoscope units. These volume control knobs affect ONLY the volume of the headset attached to them. Alteration of the volume control on the Lite V1 Stethoscope unit will NOT change the volume on
Stethoscope Feature

the Provider Access Software headset. This must be done at the Provider Access Software.

**NOTE:** As with the volume control knob, separate Diaphragm & Bell controls exist on both the Provider Access Software and Lite V1 Stethoscope units which affect ONLY what is heard through the headset attached to them. Refer to the RNK documentation for more information on the operation of the Stethoscope unit.

**NOTE:** The action of the Lite V1 Stethoscope unit is referred to as the “TX Mode” in the RNK documentation.

Technical Service—Stethoscope

If a problem should arise in regard to use of the RNK Stethoscope on the Lite V1, please contact InTouch Health Technical Service, so that Technical Service can determine the source of the issue. Questions about the RNK Stethoscope controls can be answered by reference to the RNK Stethoscope manual shipped with the Stethoscope kits.

(Should a chest piece or headset cable break, contact InTouch Health Technical Service for assistance.)
Stethoscope Feature

InTouch Lite V2 PCP Stethoscope Kit Components

- Stethoscope assembly (pre-mounted on the Lite)
- Stethoscope chest piece
- Lite V2 headset with in-line volume control

InTouch Lite V2 Stethoscope Operation

The Stethoscope chest piece is applied to a patient by hospital staff following the physician’s directions (received through normal Lite V2 audio).

**CAUTION:** Do not pull on the cables. Do not pull the Lite using the cables. Cables may break, especially near the junction points with the Lite.

- Ensure the Lite V2 is within 6 feet of the patient exam site.
- Put on the Stethoscope headset (if desired).
- Put on gloves.
- Remove the Stethoscope chest piece and disinfect it with a disposable sanitary wipe.
- Expose the patient area and apply the chest piece as directed by the physician.
- Disinfect the chest piece and return it to its bracket.
- Remove gloves.
- Remove the headset and return it to its bracket.

InTouch Lite V2 Stethoscope Headset

Using the headset is optional, but it may be used to assist with placement of the chest piece on the patient or as an aid for teaching/mentoring. The Lite V2 headset allows the nurse, resident, fellow, etc. to listen to the Stethoscope while still being able to hear the normal Lite V2 audio and other sounds in the environment.

Technical Service—Stethoscope

If a problem should arise in regard to use of the PCP Stethoscope on the Lite V2, please contact InTouch Health Technical Service, so that Technical Service can determine the source of the issue. Questions about the PCP Stethoscope controls can be answered by reference to the PCP Stethoscope manual shipped with the Stethoscope kits. Should a chest piece or headset cable break, contact InTouch Health Technical Service for assistance.

(Should a chest piece or headset cable break, contact InTouch Health Technical Service for assistance.)
Littmann Stethoscope (Optional)

InTouch Lite V3 Littmann Bluetooth Stethoscope Workflow

The Lite V3 supports Bluetooth Stethoscope technology, sold as an optional accessory by InTouch Health. Providers will be able to connect remotely to the Stethoscope on an InTouch Lite V3 endpoint through the Provider Access Software.

A Nurse or Provider monitoring the Patient Access Device will have to turn on the Bluetooth Stethoscope.

1. Ask the Provider to press Start once the Bluetooth icon on the Stethoscope starts blinking.
2. Once the Bluetooth icon is solid, patient auscultation can begin. If the Bluetooth icon does not turn solid once the Provider has pressed Start, reference Troubleshooting.

NOTE: The distance between the Stethoscope and the Patient Access Device should be less than 20 feet and there should be no obstructions between both devices.

Troubleshooting—Littman Bluetooth Stethoscope

<table>
<thead>
<tr>
<th>Possible Issues</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Device not connecting</td>
<td>The device may need to be rebooted. Restart the device and try to connect again.</td>
</tr>
<tr>
<td>Battery Low</td>
<td>To install or change the battery, follow these steps:</td>
</tr>
<tr>
<td></td>
<td>1. Twist the battery cap on the head of the Stethoscope counter-clockwise and remove it.</td>
</tr>
<tr>
<td></td>
<td>2. Inset the new battery (AA alkaline) with the positive end pointing outward.</td>
</tr>
<tr>
<td></td>
<td>3. Twist the battery cap clockwise to close.</td>
</tr>
<tr>
<td></td>
<td>4. Make sure the marks align near the opening of the cap.</td>
</tr>
</tbody>
</table>

NOTE: The Provider should be wearing an echo cancelling headset and have tested the headset through the Audio and Video wizard prior to a session.

1. Press Start once the blinking Bluetooth icon appears on the Patient Access Device (ask Remote Nurse or Provider). This will start the remote Patient auscultation.
2. Once connected, adjust the volume and auscultation mode (Bell or Diaphragm) as appropriate. Only the Provider can change these settings.
Littmann Stethoscope (Optional)

InTouch Lite V3 Interface with Littmann Bluetooth Stethoscope

- Stethoscope holder (component of Lite V3)
- Littmann Bluetooth Stethoscope (optional accessory)

InTouch Lite V3 Stethoscope Operation

The Stethoscope chest piece is applied to a patient by hospital staff following the physician’s directions (received through main Lite V3 audio).

It is recommended that you purchase the Littmann Bluetooth Stethoscope through InTouch Health, but the Littmann Bluetooth Stethoscope purchased separately can still be paired. Please call Technical Services to pair your device.

**NOTE:** It is strongly recommended that nurses disinfect the Littmann Bluetooth Stethoscope before and after use, per hospital regulations.

Technical Services

To pair your Littmann Bluetooth Stethoscope to your Lite V3, please contact Technical Services.

If a problem should arise in regard to use of the Littmann Bluetooth Stethoscope on the Lite V3, please contact InTouch Health Technical Service so that Technical Service can determine the source of the issue. Before calling Technical Services, please power cycle the Stethoscope to see if the issue corrects itself before contacting Technical Services.

Contact your InTouch Health Sales Representative for Littmann Bluetooth Stethoscope replacements.

Best Practices (Strong Recommendations)

To ensure the best quality auscultation using the Littmann Bluetooth Stethoscope, please follow these recommended guidelines:

- Minimize obstruction and electronic interference between the Stethoscope and the Patient Access Device. Other Bluetooth devices should have Bluetooth turned off to reduce interference between devices.

- Place the Stethoscope directly on the patient’s skin for optimal audio quality and minimal artifact.

- Check the battery percentage in accordance with your volume setting and conditions. The stethoscope turns off automatically when left idle. Therefore you may not need to check it at regular intervals and before each use. You can determine an interval which works for your use. It is recommended to have spare batteries conveniently stored within your care environment.
Expansion Bay Feature

Privacy Handset Device

The Privacy Handset is for use in conversations that require privacy or understandability in a loud environment.

When the Privacy Handset is enabled, the standard Lite audio system is disabled. This means the Lite microphone is not active, and the Lite speaker is not active.

When the Privacy Handset is disabled, the audio system is transferred from the phone, back to the standard Lite audio system.

It is important to return the Privacy Handset to the hook on the Lite. Ask someone on the Lite-side to return the Privacy Handset to the hook.

NOTE: Do not allow the Privacy Handset to hang off the Lite. It must be placed on the hook after use.

Network and USB Interfaces

The Lite’s expansion bay includes two USB Ports for approved USB devices. Typically, these devices include video cameras to provide additional views to the remote physician.

CAUTION: InTouch Health has not performed safety and efficacy testing of any Class II medical peripherals with the Lite other than the included Littmann Bluetooth Stethoscope. Customers must validate and test medical peripherals for their own cases and environment.

Also included is an Ethernet connector for a hardwire connection to a local network in the event that wireless communication is inadequate or not available.
Expansion Bay Feature

Auxiliary Video Ports

The Lite’s expansion bay includes two Auxiliary Video Input Ports: S-Video and Composite Video. The Lite (US) supports NTSC video; the Lite (International) supports PAL video. The Lite V3 supports DVI inputs. This allows for a variety of devices to be connected for the remote physician to view through the Provider Access Application.

NOTE: If you wish to view streaming video from external inputs in 720p HD quality, please ask Technical Support to reconfigure the bandwidth settings on your account.

WARNING: The video images transmitted to and displayed on the Lite and Provider Access may not contain all of the information in the original scene. Video information from the camera is captured, compressed, transmitted, and redisplayed remotely at a different resolution. As a result information in the original scene may be lost.

WARNING: Color reproduction in the transmitted video is not guaranteed. Color reproduction in a video system is a complicated combination of lighting, cameras, and display technology. It should not be assumed that the colors on the display are an exact replication of the actual colors in the scene.

WARNING: Clinical judgment and experience are required to review and interpret images and information transmitted via the Lite and Provider Access Software.

CAUTION: Adding third party software or hardware to the Lite may cause it to malfunction or operate erratically. Excluding those devices designed for connection through existing hardware ports, InTouch Health does not support the addition of third party software or hardware to the Lite. Please check with Technical Service PRIOR to installing any other third party devices.

CAUTION: Do not leave video equipment connected to the Auxiliary Video Input. The equipment and/or the Lite may be damaged if the Lite is moved with equipment connected to the Input.
Error Messages—InTouch Lite

<table>
<thead>
<tr>
<th>Message</th>
<th>Explanation</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Internet connection failure.”</td>
<td>Very high round-trip latency at Provider Access or Patient Access Device. Possible cause: poor internal network conditions, low Quality of Service Internet connection or excessive bandwidth usage.</td>
<td>These error messages represent non-optimal Internet connection conditions. They may happen periodically on many networks under normal conditions. However, if they persist, contact the hospital’s IT department.</td>
</tr>
<tr>
<td>“Internet connection slow.”</td>
<td>Packets lost. May see jumpy video with lower frame rates at Provider Access or Patient Access Device. Possible cause: poor internal network conditions, low Quality of Service Internet connection or excessive bandwidth usage.</td>
<td></td>
</tr>
<tr>
<td>“Internet failure: Severe loss.”</td>
<td>Problem was detected on reverse side (i.e., at the Provider Access). These messages are shown if problem is only being detected in one direction.</td>
<td></td>
</tr>
<tr>
<td>“Internet failure: Severe loss remotely.”</td>
<td>Packets containing audio data lost, therefore user may notice loss of audio at Provider Access or Patient Access Device. Possible cause: poor internal network conditions or low Quality of Service Internet connection or excessive bandwidth usage.</td>
<td></td>
</tr>
<tr>
<td>“Internet failure: Audio lost.”</td>
<td>Problem was detected on reverse side (i.e., at the Provider Access). These messages are shown if problem is only being detected in one direction.</td>
<td></td>
</tr>
<tr>
<td>“Internet failure: Audio lost remotely.”</td>
<td>Problem was detected on reverse side (i.e., at the Provider Access). These messages are shown if problem is only being detected in one direction.</td>
<td></td>
</tr>
<tr>
<td>“No stethoscope audio. Power cycle it next to the device.”</td>
<td>Physician cannot auscultate because the stethoscope audio is no longer connected to the Provider Access Software.</td>
<td>Restart Stethoscope and try again.</td>
</tr>
<tr>
<td>“Stethoscope disabled due to critically low batter (10%). Please replace battery for normal operation.”</td>
<td>Battery needs to be charged or replaced by the nurse on the Patient Access side.</td>
<td>Charge or replace battery.</td>
</tr>
<tr>
<td>“Stethoscope battery is critically low (10%). Sound degradation expected. Please replace battery soon.”</td>
<td>Battery is critically low. Consider charging or replacing the battery soon.</td>
<td>Charge or replace battery.</td>
</tr>
</tbody>
</table>

Lite Messages: These text messages may appear in the lower right of the Lite Display.

**WARNING:** Do not attempt to open or remove any parts of the Lite. To reduce the risk of electric shock, do not remove the cover. There are no user-serviceable components inside. Refer servicing and repair to qualified personnel only.
Cleaning and Maintenance

InTouch Lite Cleaning Procedure

It is recommended that the outer surfaces of the Lite be cleaned when visibly soiled and/or after contact with any contaminated surface.

- Prior to cleaning, make sure the Lite is unplugged and the main power is Off.
- Soak a clean cloth in a hospital grade environmental disinfectant solution (such as a quaternary ammonium) and wring out the rag.
- Wipe surfaces that have become soiled or contaminated. Avoid applying excess solution which may enter the Lite through its openings.
- Allow to air dry.

To clean the monitor, use an LCD computer screen cleaner to prevent craze, staining or discoloration.

To clean the camera lens, use an optical lens cleaner.

**WARNING:** Do not attempt to open or remove any parts of the Lite.
To reduce the risk of electric shock, do not remove the cover.
There are no user-serviceable components inside.
Refer servicing and repair to qualified personnel only.

**CAUTION:** DO NOT IMMERSE the Lite.
DO NOT ALLOW any cleaning solution inside the Lite.
Avoid excess solution which may enter the Lite through its openings.

**CAUTION:** The Lite should be kept free from moisture and extreme temperatures.

Maintenance And Inspection

InTouch Lite Maintenance

The Lite contains no user serviceable parts and require no maintenance. For further information regarding maintenance or assistance with troubleshooting, customers should contact InTouch Health Technical Service.

InTouch Lite Recycling and Disposal

InTouch Health leased Lite units must be returned at the conclusion of their lease contract for recycling or reuse. If the equipment was purchased, it is the responsibility of the customer to make sure any electronic waste or equipment is properly disposed of when necessary. For more information about where you can drop off your waste for recycling, please contact your local authority.
InTouch Lite and Network Installation

Unpacking and Charging the InTouch Lite

Carefully remove the Lite from its packaging taking care not to cause damage.

Plug the Lite into a standard grounded AC outlet and allow the system to charge for at least 6 hours to reach a full charge.

**NOTE:** For the Lite V3, the battery switch (located on the base) must be switched to ON/Forward before plugging it into an AC outlet.

Moving the InTouch Lite

**WARNING:** The Lite is not MRI (Magnetic Resonance Imaging) safe and is not MRI compatible. The Lite should only be used in locations where the presence of metal is not controlled.

**WARNING:** Flammable Anesthetics: The Lite is not suitable for use in the presence of flammable anesthetic mixture with air, or in the presence of a flammable anesthetic mixture with oxygen or nitrous oxide.

The Lite is designed to be moved by hospital staff into a broad array of locations ranging from clinics, emergency rooms, rural hospitals, long-term care communities, and more. The requirement for operation is a standard grounded AC outlet supplying a minimum of 120 VAC, 60 Hz, 5.1 A (US) or 230 VAC, 50 Hz, 2.7A (International) or 100-240VAC 50/60HZ 6.5A for Lite V3.

- Ensure Lite is set at its lowest position.
- Ensure any auxiliary devices attached to Lite are unplugged.
- Ensure the power cord is unplugged.
- Ensure the wheels are unlocked before moving.
- Exercise caution when encountering thresholds.
- Move it to the desired location.
- Lock the wheels.
- Plug in the power cord.

(See **Power On Sequence** to turn on power.)

**CAUTION:** The Lite contains sealed, rechargeable, lead-acid, gel-type batteries. The Lite should always be plugged in to avoid deep discharge cycles that can shorten the battery's useful life. Other than keeping the batteries charged by keeping the Lite plugged in, no user maintenance of the batteries is required.

InTouch Lite Monitor Display

When the Lite is not actively connected to a Provider Access Software, a screen saver will appear. Technical information can be displayed by pressing the button.
InTouch Lite and Network Installation

Network Configuration

Wireless Network Considerations

The Lite requires a wireless network distributed over the area where it is intended to roam. The Lite may be configured for 802.11a, 802.11g, or 802.11n. The optimal configuration is determined during installation.

To attain optimal performance there are several considerations which must be taken into account when designing the wireless network.

Configuring the Lite Wireless Connection

The Lite RP Control Core uses a Windows computing environment and a wireless network card. This card is an Intel Ultimate N WiFi Link 6300 (Intel Dual Band Wireless AC7260 WIFI for Lite V3) and can be configured in using Microsoft/Windows wireless configuration.

Please refer to the manufacturer's product documentation available through their website: www.intel.com.

Non-overlapping channels

In order to achieve a smooth transition from one wireless access point (WAP) to the next it’s important to configure each WAP on a non-overlapping channel.

Transmitting power

The WAPs may be configured to provide the wireless signal at different power transmission levels. Setting the WAP to the maximum power transmission will deliver the maximum coverage area.

Interference

If WAPs are co-located in the same environment, radio frequency interference may be generated. Too many WAPs transmitting on overlapping channels may also degrade the wireless signal quality.

WAPs placed too close to one another may also produce RF congestion. In this case, the WAP transmission power should be reduced; therefore, reducing the coverage area and limiting the overlap between adjacent WAPs.

Security Options

Each wireless network must be configured with security to prevent unauthorized access to the network. The ADU provides multiple features to configure the Lite to access as well as secure the wireless network. Domain membership is not supported, but all other current security configurations can be configured. WPA2/AES-PSK is preferred.

InTouch Telehealth System Network Communication
The InTouch Telehealth System is comprised of a Remote Presence Patient Access Device and a minimum of one Provider Access Software Device. The Provider Access and Patient Access Devices are
Network Requirements

linked via the Internet over a secure connection. The Patient Access Device operates on either an 802.11 Wi-Fi network or via Ethernet.

Provider Access User Authentication

Users launch the Provider Access Software from their desktops and login to begin consults. Users have a unique username and password for their Provider Access accounts, which is created at registration.

Enterprise login allows users to use their company credentials to login to the Provider Access Software. If your system is configured to use Enterprise login, your system may automatically login to the Provider Access Software. Users should make sure to comply to HIPAA standards by ensuring that they log off when away from their computers for extended periods of time.

If password protection is enabled, but the Provider Access Software is not connected (or in the process of connecting) to a Patient Access Device, the Provider Access Software will automatically close after five minutes as an additional means of protecting the system from unauthorized access.

Firewall Requirements

The InTouch Telehealth System uses bidirectional communication under TCP and/or UDP. The InTouch Telehealth Network consists of connections made through either our SharedComm or SIP servers. For optimal connections using SharedComm, Patient Access Devices and Provider Access Software require outgoing UDP access on ports 9000-9101 with reflexive UDP access ('UDP Replies') enabled. (Note: UDP replies are enabled by default on most firewalls). For optimal connections using SIP, Patient Access Devices and Provider Access Software require outgoing UDP access on ports 35000-35500 with reflexive UDP access ('UDP Replies') enabled.

For training and support purposes (including software upgrades), InTouch Health routinely makes use of remote desktop applications (Kaseya, GoToAssist & GoToMyPC). InTouch Health requires access to all Provider Access Devices and Provider Access Software via one of these applications.

For a detailed list of IP addresses and ports to white list, please refer to the document: Network Configuration for InTouch Devices (MB-15513). Additional modifications may be necessary for use with a Web Filter and/or Stateful Packet Inspection.

Video Information

Frame rate: Video is captured at 30 frames per second but can be reduced for low bandwidth connections.

Codec (video and audio compression): InTouch Health uses the standards-based H.264 codec for video and the Speex codec for audio.

Dynamic Video Quality provides the ability to dynamically adjust resolution and video quality during a live session without user interaction. Advanced users can specify preferences for adjusting resolution. Video quality depends on factors such as robot motion, available bandwidth, and user preference.

Bandwidth Requirements
Network Requirements

The ideal bandwidth required is 700 kbps in both directions from any Provider Access Software or Patient Access Device. For Provider Access Software located in homes, lower bandwidths such as home cable broadband can be configured with good performance effectively utilizing 300 kbps. For installations where higher audio and video quality is desired, higher bandwidths above 700 kbps can be allocated.

For HD video, your Provider Access Device must be configured to allow 2000-3000 kbps.

Line Quality Requirements

Network performance is critical to maintaining a responsive Provider Access Software to Patient Access Device session. Metrics cover a range of network characteristics which impact delivery of complete correct data in the proper order in a timely fashion. InTouch Health runs tests using proprietary and third party software tools to determine if a broadband connection (wired or wireless) meets a sufficient level of network performance to maintain a session. InTouch Health can provide these tools to customers upon request.

NOTE: During any particular session, quality may be degraded or the session may be disconnected if the network performance limits described below are exceeded, even though performance measurements were within limits at another point in time.

There are five important network characteristics affecting connectivity:

- **Data rate**: A connection must have the required up-stream and downstream bandwidth, as discussed above.
- **Latency (delay)**: Average network latency on a connection should not exceed 300ms.
- **Reliability**: A connection must be reliable, without significant packet loss. A connection should experience no more than 3% packet loss.
- **Jitter**: Jitter is variability in latency. Jitter on a connection should not exceed +/- 50ms during 95% of the duration of a session.
- **Maximum Transfer Unit**: The Maximum Transfer Unit (MTU) must not be set below 1400 bytes.

NOTE: InTouch Health’s software is fully capable of dealing with the normal variability of data over the Internet. It is the quality of the endpoint connections which is critical and must be tested.

Wireless Network Requirements

The InTouch Health System is compatible with 802.11 a, g, and n protocols. The Maximum Handoff Threshold time must be less than 150ms.

In environments which experience network congestion, the InTouch Health application requires Quality of Service (QoS) or priority of traffic to ensure a successful connection.

Satellite Networks

The network characteristics detailed above (bandwidth requirements, packet loss, jitter, and MTU) are strongly recommended to achieve an audio/video session of functional quality over a satellite network. The one notable exception is the expected latency typical of satellite networks.

The InTouch Health System can maintain an audio/video session of functional quality with latency up to 900 ms if all other network characteristics are met. Please note that this delay will be evident on both sides of any audio/video/command communication as is typical of satellite networks.
Network Requirements

If utilizing a satellite network with latency above 600 ms, the delay in drive commands may hinder the operator from maintaining safe control over the movement of mobile devices. InTouch Health therefore does not recommend utilizing mobile devices, such as the InTouch 7i, on a satellite network.

Encryption

The InTouch Health System incorporates encryption methodology utilizing a combination of RSA public/private key and 256-bit AES symmetric cryptography. The following is a brief summary:

Each time a Provider Access session is initiated, a symmetric key is created using AES 256-bit cryptography. The encrypted data is then transmitted using RSA 4096-bit public-private key cryptography. PHI and other sensitive health information is further secured using SSL/TLS and other different forms of authentication.

Virus Protection

TrendMicro's OfficeScan is installed on every system. This software automatically updates as soon as new virus definitions are available. InTouch Health staff monitor software updates as they become available. InTouch Health staff install all necessary security updates on Patient Access Devices.
### InTouch Lite Technical Specifications

#### Physical Specifications For Lite V1

*Some early Lite models may have lens/camera configurations that provide less than 26x zoom capability.*

**Performance**

<table>
<thead>
<tr>
<th>Head:</th>
<th>Pan range: +/-170°</th>
<th>Tilt range: +27° / -65° max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audio:</td>
<td>Microphone: mono, directional (hyper-cardioid), 10Hz-40kHz, binaural, omnidirectional, 10Hz-40kHz&lt;br&gt;Speaker: Two 60 W mono</td>
<td>16 kHz sampling rate, 16-bit audio</td>
</tr>
<tr>
<td>Video:</td>
<td>Camera: 26X equivalent zoom, remote zoom &amp; focus*&lt;br&gt;Video: 30 fps, 640x480 px resolution, 24-bit color</td>
<td>Display: 15&quot; LCD, 1024x768 px, 250 NITS</td>
</tr>
</tbody>
</table>

**Wireless Network:**

- 802.11 a, g, or n

**Battery Life:**

- 2-3 hrs (depending on usage)

**Charging Time:**

- 4 hrs from 100% discharge to 80% charge<br>(6 hrs to 100% charge)

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*Image Credit: InTouch Health*
InTouch Lite Technical Specifications

Physical Specifications For Lite V2

Performance

<table>
<thead>
<tr>
<th>Head:</th>
<th>Pan range: +/- 170°</th>
<th>Tilt range: +27° / -65° max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audio:</td>
<td>Microphone: mono, directional (hyper-cardioid), 10Hz-40Hz</td>
<td>16 kHz sampling rate, 16-bit audio</td>
</tr>
<tr>
<td></td>
<td>Speaker: Two 60 W mono</td>
<td></td>
</tr>
<tr>
<td>Video:</td>
<td>Camera: 26X equivalent zoom, remote zoom &amp; focus</td>
<td>Display: 15&quot; LCD, 1024x768 px, 400 NITS</td>
</tr>
<tr>
<td></td>
<td>Video: 30 fps, 640x480 px resolution, 24-bit color</td>
<td></td>
</tr>
<tr>
<td>Wireless</td>
<td>802.11 a, g, or n</td>
<td></td>
</tr>
<tr>
<td>Battery Life:</td>
<td>7 hrs (depending on use)</td>
<td></td>
</tr>
<tr>
<td>Charging Time:</td>
<td>4 hrs from 100% discharge to 80% charge (6 hrs to 100% charge)</td>
<td></td>
</tr>
</tbody>
</table>
## InTouch Lite Technical Specifications

### Physical Specifications For Lite V3

<table>
<thead>
<tr>
<th>Performance</th>
<th>Head: Pan range: +/- 170°</th>
<th>Tilt range: +27° / -65° max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audio:</td>
<td>Microphone: mono, directional (hyper-cardioid), 10Hz-40Hz</td>
<td>16 kHz sampling rate, 16-bit audio</td>
</tr>
<tr>
<td></td>
<td>Speaker: Two 60 W mono</td>
<td></td>
</tr>
<tr>
<td>Video:</td>
<td>Camera: 26X equivalent zoom, remote zoom &amp; focus Video: 30 fps, 640x480 px resolution, 24-bit color</td>
<td>Display: 15&quot; LCD, 1024x768 px, 400 NITS</td>
</tr>
<tr>
<td>Wireless</td>
<td>802.11 a, ac, g, or n</td>
<td></td>
</tr>
<tr>
<td>Battery Life</td>
<td>7 hrs (depending on use)</td>
<td></td>
</tr>
<tr>
<td>Charging Time</td>
<td>4 hrs from 100% discharge to 80% charge (6 hrs to 100% charge)</td>
<td></td>
</tr>
</tbody>
</table>

Weight: 150 lbs (68 kg)

*Max Height: 88.1" (224 cm) 76" (193 cm) 18.4" (47 cm)

*Min Height: 32" (81 cm) 54.5" (138.4 cm) 22" (56 cm)
InTouch Lite Technical Specifications

System Input Power Requirements (Lite V1 and Lite V2):

<table>
<thead>
<tr>
<th></th>
<th>Lite (US)</th>
<th>Lite (International)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>120 VAC</td>
<td>230 VAC</td>
</tr>
<tr>
<td>Frequency</td>
<td>60 Hz</td>
<td>50 Hz</td>
</tr>
<tr>
<td>Current</td>
<td>5.1 Amps</td>
<td>2.7 Amps</td>
</tr>
</tbody>
</table>

Auxiliary AC Power Receptacle (Lite V1 and Lite V2):

<table>
<thead>
<tr>
<th></th>
<th>Lite (US)</th>
<th>Lite (International)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>115 VAC</td>
<td>230 VAC</td>
</tr>
<tr>
<td>Frequency</td>
<td>60 Hz</td>
<td>50 Hz</td>
</tr>
<tr>
<td>Current</td>
<td>2.1 Amps</td>
<td>1.7 Amps</td>
</tr>
</tbody>
</table>

Classification (Lite V1 and Lite V2):

Class I, Type BF, Continuous Operation

General Specifications (Lite V1 and Lite V2):


- CSA C22.2#601.1: Issue:1990/01/01 Medical Electrical Equipment - Part 1: General Requirements for Safety General Instruction No 1; Supplement 1; 1994; Amendment 2 - February 1998; Update No. 2 (R2001).

EMC Classification (Lite V1 and Lite V2):


Environmental Specifications (Lite V1 and Lite V2):

Operating:

- Designed to operate in an indoor environment suitable for human personnel. (10° to 40° C, 30 to 75% RH, 700 hPa to 1,065 hPa)

Non-operating:

- Designed to travel to installations in commercial and cargo airliners and standard ground transportation. (0° to +50° C, 10 to 95% RH, 700 hPa to 1,065 hPa)
InTouch Lite Technical Specifications

System Input Power Requirements (Lite V3):

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage:</td>
<td>100-240 VAC</td>
</tr>
<tr>
<td>Frequency:</td>
<td>50/60 Hz</td>
</tr>
<tr>
<td>Current:</td>
<td>6.5 Amps</td>
</tr>
</tbody>
</table>

Classification (Lite V3):

Class I, Type B, Continuous Operation

General Specifications (Lite V3)

- IEC 60601-1
  Issued: 2012/08/20 Ed: 3.1 Medical Electrical Equipment - Part 1:
  General Requirements for Basic Safety and Essential Performance;

- CENELEC EN 60601-1
  Issued: 2006/10/01 Ed: 3 Medical Electrical Equipment – Part 1:
  General Requirements for Basic Safety and Essential Performance;
  AAMI ES60601-1:2005+A1
  Medical Electrical Equipment - Part 1: General Requirements For
  Basic Safety And Essential Performance (R2012)

- CAN/CSA C22.2#60601-1
  Issued: 2014/03/01 Ed: 3 Medical Electrical Equipment - Part 1:
  General Requirements for Basic Safety and Essential Performance (Adopted IEC 60601-1:2005, third
  edition, 2005-12, including amendment 1:2012, with Canadian deviations)

- IEC 60601-1-6
  Issued: 2013/10/29 Ed: 3.1 Medical Electrical Equipment - Part 1-6:
  General Requirements for Basic Safety and Essential Performance
  - Collateral Standard: Usability

- IEC 62366
InTouch Lite Technical Specifications

Issued: 2014/01/28 Ed. 1.1 Medical Devices - Application of Usability Engineering to Medical Devices

- IEC 62304

Issued: 2006/05/09 Ed:1 MEDICAL DEVICE SOFTWARE -SOFTWARE LIFE CYCLE PROCESSES

- IEC 60601-1


- IEC 60601-1-4

Issue: 2000/04/01 Ed:1.1 Medical Electrical Equipment - Part 1-4:
General Requirements for Safety - Collateral Standard:
Programmable Electrical Medical Systems; Edition 1:1996
Consolidated with Amendment 1:1999

- IEC 60601-1-6

Issued: 2004/06/01 Ed:1 Medical electrical equipment - Part 1-6:
General requirements for safety - Collateral Standard: Usability

EMC Classification (Lite V3):

- IEC 60601-1-2

Issued: 2007/03/30 Ed: 3 Medical Electrical Equipment - Part 1-2:
General Requirements for Safety - Collateral Standard:
Electromagnetic Compatibility - Requirements and Tests

- ETSI EN 301 489-9

Issued: 2002/04/01 EMC and ERM; (EMC) Standard for Radio Equipment and Services; Part 9: Specific Conditions for Wireless Microphones, Similar Radio Frequency (RF) Audio Link Equipment, Cordless Audio and In-Ear Monitoring Devices-V1.3.1

- ETSI EN 301 489-17

Issue: 2009/05/12 ELECTROMAGNETIC COMPATIBILITY AND RADIO SPECTRUM MATTERS (ERM); ELECTROMAGNETIC COMPATIBILITY (EMC) STANDARD FOR RADIO EQUIPMENT; PART 17: SPECIFIC CONDITIONS FOR BROADBAND DATA TRANSMISSION SYSTEMS - V2.1.1

- ETSI EN 301 489-1

Issue: 2011/09/22 V.1.9.2 Electromagnetic Compatibility and Radio Spectrum Matters (ERM); Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements.
InTouch Lite Technical Specifications

Environmental Specifications (Lite V3):

Operating:
• Designed to operate in an indoor environment suitable for human personnel. (10° to 38° C, 30 to 75% RH, 700 hPa to 1,065 hPa)

Non-operating:
• Designed to travel to installations in commercial and cargo airliners and standard ground transportation. (0° to +50° C, 10 to 95% RH, 700 hPa to 1,065 hPa)
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