User Manual

V.0.9B 100528T0110203

WARNING: This product or device is not intended to provide any medical benefit and has not been evaluated by the Food and Drug Administration.

Legal Disclaimer: At Box NurseVue is a wireless patient monitoring system. Use of this product is not intended as a substitute for advice from your physician or other health care professional. This product should not be used by children and is not intended as a substitute for medical treatment, adult care or supervision. Said product is designed as a communication or monitoring product and is not intended as a substitute for any care or treatment.

This product is not intended to diagnose, treat, cure or prevent disease and is simply for the purposes stated in the products label and packaging materials.

Persons with a pacemaker or other implanted devices should check with their physician or other health care professional to determine whether use of this product may interfere with any such device.

If you have a serious medical condition, the use of this device should not replace any competent medical supervision you are currently receiving.

LIMITED WARRANTY

1. AT BOX TECHNOLOGY INC. WARRANTY

At Box Technology Inc. warrants said product is free of defects in material and workmanship for a period of one year from the date of original purchase. THIS WARRANTY APPLIES ONLY TO THE ORIGINAL PURCHASER OF THIS PRODUCT.

In the event of a defect, At Box Technology Inc. will, at its option, repair or replace the product with no charge to the purchaser for parts or labor. The repaired or replaced product will be warranted for ninety (90) days from the date of return shipment, or for the balance of the original warranty, whichever is longer.

2. PURCHASERS REMEDY

THE PURCHASER'S EXCLUSIVE REMEDY UNDER THIS WRITTEN WARRANTY OR ANY IMPLIED WARRANTY SHALL BE LIMITED TO THE REPAIR OR REPLACE MENT, WITH ANY SUCH REPAIRS UNDER THIS WARRANTY TO BE MADE AT AN AUTHORIZED AT BOX FACILITY OR SERVICE CENTER.

3. LIMITATION OF IMPLIED WARRANTIES

Except as set forth in items 1 and 2 above, all other expressed or implied warranties, including those of fitness for any particular purpose or merchantability, are hereby disclaimed.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

4. EXLUSION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES

AT BOX TECHNOLOGY INC. SHALL NOT BE LIABLE TO PURCHASER OR ANY OTHER PERSON FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES WHATSOEVER, **INCLUDING BUT NOT LIMITED TO LOST** PROFITS. DAMAGES RESULTING FROM DELAY OR LOSS OF USE, LOSS OF OR DAMAGES ARISING OUT OF BREACH OF THIS WARRANTY OR ANY IMPLIED WARRANTY EVEN IF CAUSED BY NEGLIGENCE OR OTHER FAULT. IN NO **EVENT WILL AT BOX TECHNOLOGY INC. BE** RESPONSIBLE FOR SUCH DAMAGES, EVEN IF AT BOX TECHNOLOGY INC. HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Some states do not allow the exclusion of incidental or consequential damages so the above limitation or exclusion may not apply to you.

5. MERGER

This written warranty is the complete, final and exclusive agreement between At Box Technology Inc. and the purchaser with respect to the quality of performance of the goods and any and all warranties and representations. THIS WARRANTY SETS FORTH ALL OF AT BOX TECHNOLOGY INC.'S RESPONSIBILITES REGARDING THIS PRODUCT.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

Introduction

Congratulations and thank you for purchasing NurseVue by At Box Technology!

NurseVue by At Box Technology is a wireless patient monitoring solution that is designed to keep nurses and care givers in closer communication with patients. This technology provides significant, positive impacts on the nurses' and care givers' productivity and effectiveness.

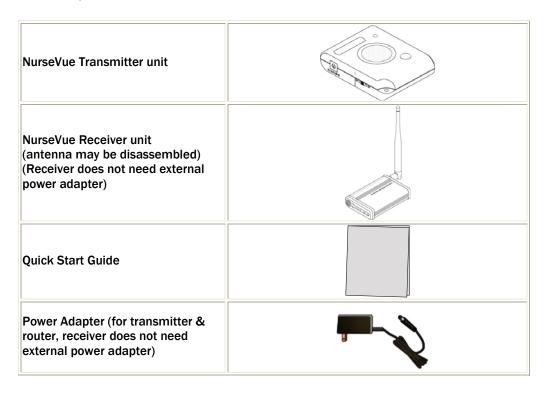
By using NurseVue wireless patient monitoring systems, nurses and care givers can communicate with patients from wherever they are within a facility. More importantly, nurses and care givers can be alerted to emergencies within seconds and can escalate an event notification, if needed. This ability to communicate or forward messages, while allowing nurses to meet the needs of multiple patients without having to walk to each room, increases efficiency and reduces caretakers' stress by eliminating the feeling of being needed in all places at once.

NurseVue Wireless Patient Monitoring System consists of sensors, light weight wireless transmitter, a USB receiver, an optional router, and software that runs on a Windows based PC. In a nursing home or hospital environment, NurseVue allows care givers to reduce the time and effort in caring for their patients. At the same time, NurseVue improves patients' comfort while minimizing medical conditions such as rash, urinary tract infection that may trigger additional complex medical problems.



Package Contents

Each model of NurseVue has slightly differing package contents. Check the table below to verify that your set is complete.



System Requirements

	Minimum	Optimal	
CPU Type	Any CPU with SSE2 instruction support.		
CPU Speed	1.6 GHz	2.0 GHz or faster	
CPU Cores	Single-core	Dual-core or better	
RAM	512MB	1GB or more	
Operating System	Windows 2000, XP SP2, Vista, or Windows 7	Windows XP SP2	

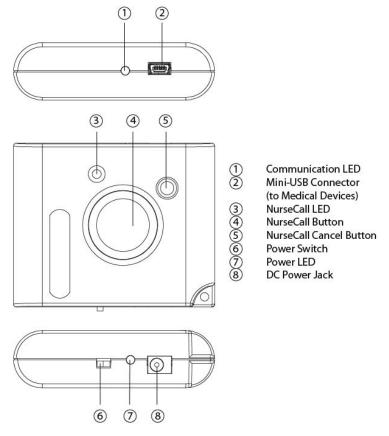
Note: To ensure At Box NurseVue software is running properly without interruptions, users are recommended to turn off screen savers, auto software updates that could cause the computer to reboot itself.

Hardware Specifications

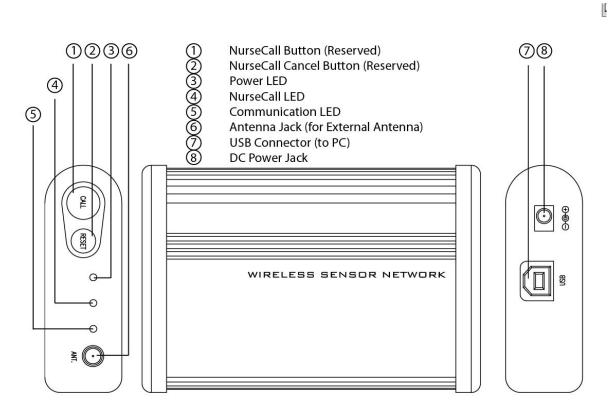
At Box NurseVue system consists of wireless transmitters, a wireless receiver.

	NurseVue Transmitter	NurseVue Receiver	
Part Number	NV-TX100	NV-TRUX100	
Product Image (Actual product may be slightly different from the images shown)			
Interface to Medical Device	Mini-USB Female	NA	
NurseCall Button	Yes	Yes (Disabled)	
NurseCall Cancel Button	Yes	Yes (Disabled)	
Antenna	Internal	External (Reverse SMA)	
Wireless Networking Standards	IEEE 802.15.4 / ZigBee		
Antenna Connector	Reverse SMA		
Wireless Frequency Band	2.4GHz		
Wireless Network Authentication	TBD		
Wireless Data Encryption	TBD		
Industry Certifications	RoHS, CE, FCC Part 15 Class B/C, UL, cUL		
Power Requirements	5 VDC, 600mA		

Hardware Specifications



NurseVue Transmitter



NurseVue Receiver and Router

LED Status Indicators

NurseVue transmitters, receiver, and router have LEDs which indicate its operating status. The table below explains the various states of the LEDs:

	NurseVue Transmitter	NurseVue Receiver	
LED	NV-TX100	NV-TRUX100	
Power LED	(With AC Adapter & Turned On): Solid Orange - Charging Orange Off - Battery Fully Charged	Solid Orange - On	
	(Without AC Adapter & Turned On): Solid Orange - Low Battery		
	Momentarily Green - Connected		
Communication LED	Solid Green - Disconnected	Momentarily Green - Connected	
	Blinking Green (once / 10sec) - Reconnecting	Solid Green - Error	
NurseCall LED	Blinking Red (once / 1sec) - NurseCall Alarm	Managatavilly Dad. Comparts d	
	Solid Red - Disconnected	Momentarily Red - Connected Solid Red - Error	
	Blinking Red (once / 10sec) - Reconnecting		

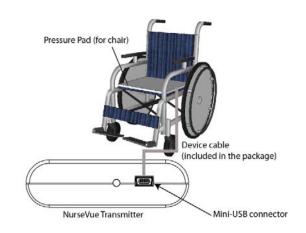
Hardware Installation

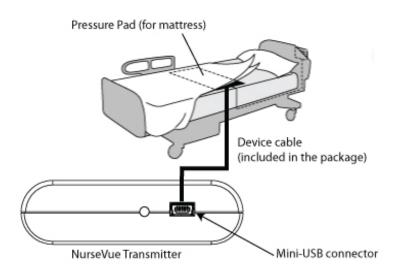
1. Configuring NurseVue Transmitters:

First, ensure that NurseVue transmitter, receiver, and connected devices are powered off.

• Connect the mini-USB end of the adapter cable (supplied in the package) to the transmitter. Connect the other end of the adapter cable to the pressure pad..

Connect transmitter to bed or chair pressure pad

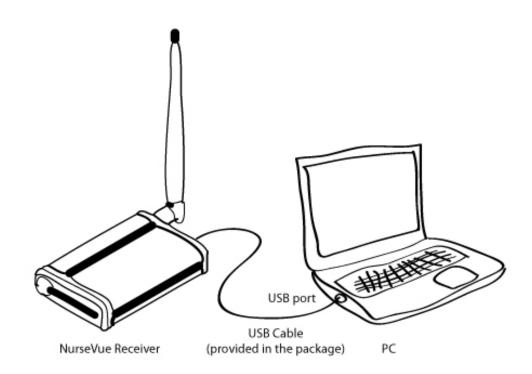




Do NOT power on any device until the entire configuration is finished.

2. Configuring NurseVue Receiver:

Connect the NurseVue receiver to a computer's USB port using the USB cable (provided in the package). Note that the NurseVue receiver is powered through this connection, It is NOT necessary to connect the NurseVue receiver to a DC power supply.



Connecting NurseVue Receiver to the PC

3. Configuring NurseVue Router: (must be used where distance from transmitter to receiver exceeds 40 feet)

NurseVue router may be used to improve the communication between NurseVue transmitters and the NurseVue receiver. Connect the NurseVue router to a wall outlet using the power adapter included in the package.

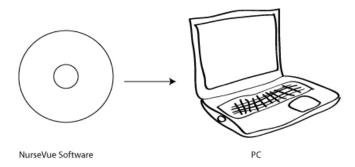
This step is only necessary if the communication between the transmitters and the receiver is more than 40~50 feet. This range may vary, and it depends on the environment. In which case, the NurseVue router can be configured and used as a repeater to improve communication.

Where a router is required, it is recommended that the router is placed about 40 feet away from the receiver. Transmitters can be about 40 feet away from the router. When a second router is needed to further increase the transmission distance, it is recommended that the second router be placed 60 feet away from the first router. Transmitters can be placed about 40 feet away from the second router. This improves communication reliability as signals received at the second router go through the first router (as a signal booster) before reaching the receiver.

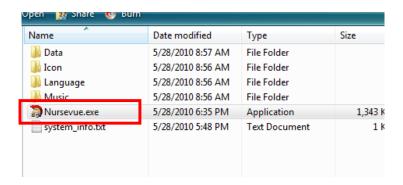
Software Installation

Installing NurseVue Software:

Install the NurseVue software on your computer by inserting the included CD into your PC's CD or DVD drive. Copy the entire NurseVue folder to the desired location on the PC.

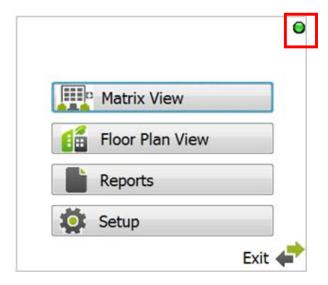


Upon completion, double click on the NurseVue.exe file to launch the software.



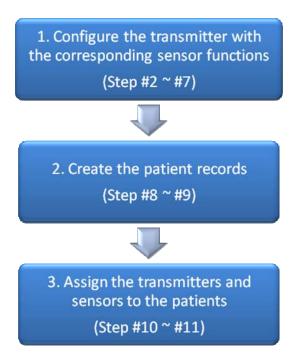
Software Configurations

1. Upon launching the NurseVue software, NurseVue's main menu will be presented as illustrated below.

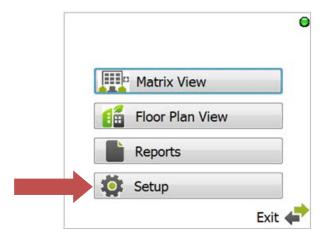


If the receiver is properly connected to the computer, a green dot on the upper right corner will be shown. If you see a red dot, please refer to the trouble shooting section for suggestions.

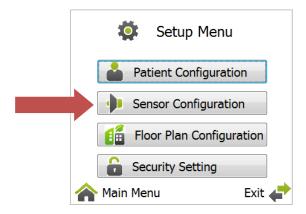
The followings are the **3 main steps** that need to take place to configure the NurseVue transmitters.



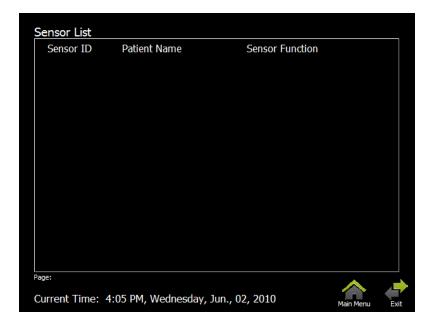
2. Click on the "Setup" button on the Main Menu.



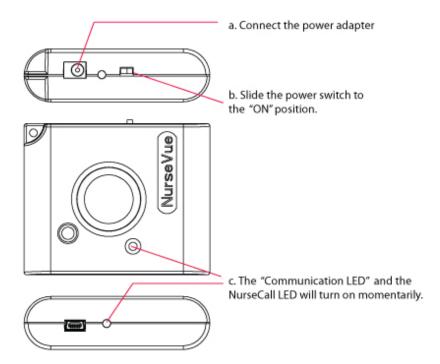
3. Click on the "Sensor Configuration" button on the Setup Menu.



4. If this is a first time installation, a screen similar to the one below will be presented.



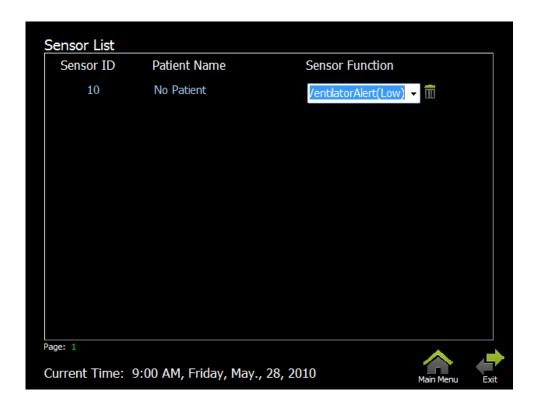
- 5. Now, turn on the NurseVue transmitters one at a time using the following steps:
 - a. Connect the power supply to the transmitter, *figure a.*. (This step can be omitted is the transmitter is already fully charged. A solid orange LED indicates the transmitter needs to be charged.)
 - b. Turn the power switch to the 'ON' position figure b.
 - c. If done correctly, the transmitter's "Communication LED" on the side *figure c* and the NurseCall LED next to the push button *figure c*, will flash solid once (indicating power on and attempting to connect to the network). These two LEDs will go off momentarily, which indicates that it has established communications with the NurseVue receiver. If the LEDs continue to be lit solid, the communication has not yet been established. If this continues for more than 1 minute, it is recommended that the transmitter be turned off and back on again. User should wait for LEDs to go off before proceeding further.
 - d. Once the two LEDs go off, proceed with turning on the next transmitter if applicable.



If applicable, turn on the devices that are connected to the transmitters.

6. When the NurseVue transmitter establishes connection with the NurseVue receiver and the PC, the software confirms it by showing the found transmitter (Transmitter ID #10) as shown below.

Configure the transmitters by performing the steps below using Step 5 above for each transmitter (one at a time).

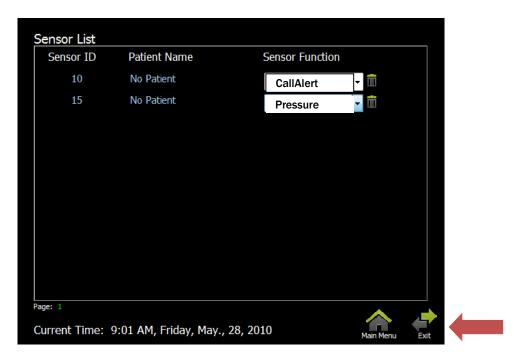


Configuration on NurseCall Function – Select "CallAlert" from the dropdown box (under Sensor Function).

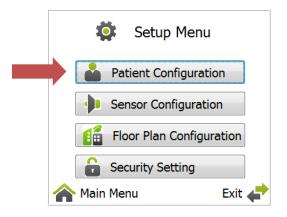
Configuration on Pressure Pad Function – Select "PressureAlert" from the dropdown box (under Sensor Function).

Configuration on NurseCall Function – Select "NurseCall" from the dropdown box (under Sensor Function). When a Patient Profile is created and assigned to the transmitter with the "NurseCall Function" (completion of Step #9~10), an alert will be sent from the NurseVue transmitter when then NurseCall button is pushed. The alert will be cancelled when the NurseCall Cancel button is pressed.

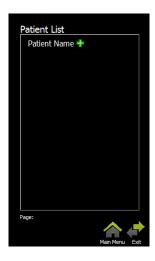
7. Once configured, the screen will be similar to the one below. When ready, click on the "Exit" button on the lower right to go to the next step.



8. After clicking on the "Exit" button, the software will return to the "Setup" Menu. Click on the "Patient Configuration" button to create patient profiles.

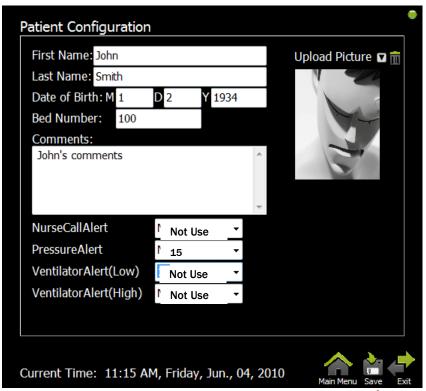


9. If this is a first time installation, a screen similar to the one below will be shown. Click on the Green plus sign "+" to create a new patient profile.



10. The Patient Configuration screen similar to the one below (with blank fields) will be shown. Input the proper information into each field. Click the down arrow next to "Upload Picture" to include an image of the patient. Finally, assign transmitters with different sensors by using the drop down box at the bottom half of the screen. (The sample shown is using Transmitter #10 to connect to a ventilator.)

You must click on the "Save" button on the lower right to save this record prior to exiting this screen.



Required Fields:

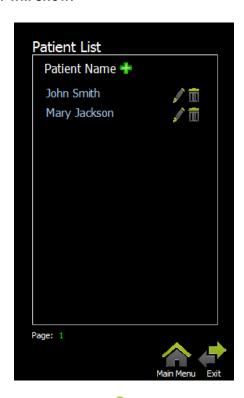
- First Name
- Last Name
- Bed Number

Note:

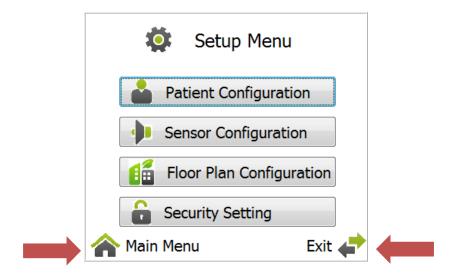
The previously assigned transmitters MUST be configured here to allow the system to function properly!



11. Click on the "Exit" button on the lower right of the screen to exit the screen. Repeat Step #9 and 10 to add additional patients and assign the previously configured transmitters to them. A screen similar to the one below will show.



Click on to edit the patient record. Click on to delete the patient record. Click on the "Exit" button when finished. This will take you back to the Setup Menu shown below.

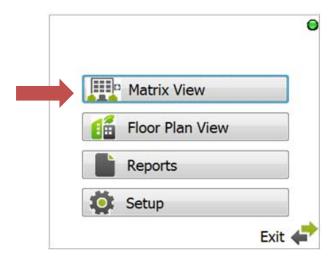


Note: The "Main Menu" at each screen takes the user to the Main Menu screen. The "Exit" buttons at each screen exits from the current screen and return the user to the previous screen.

Running the Software - Matrix View

1. You are now ready to monitor the patients using NurseVue software. There are two ways to monitor patients' status. The "Matrix View" allows the alerts to be shown on a grid. The "Floor Plan View" allows the alerts to be overlaid on top of a floor plan image. This section focuses on the configuration and usage of Matrix View.

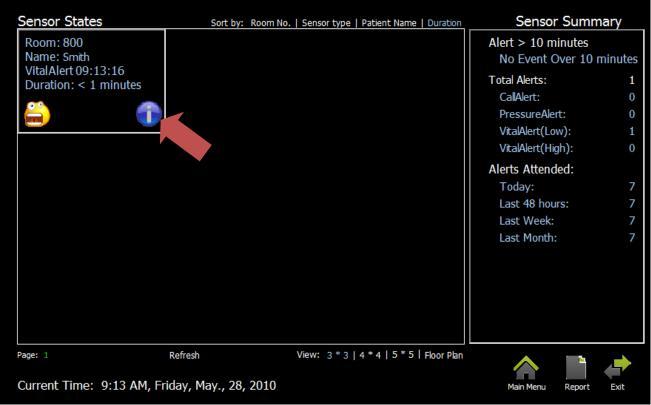
Click on the "Matrix View" button from the Main Menu to access the Matrix View.



2. A screen similar to the one below will be shown. This is the screen that displays patients' status.



3. When an alarm is triggered, the NurseVue transmitter will wirelessly send an alert to the NurseVue receiver. The NurseVue software displays the alarm(s) as shown below.



The screen shown above indicates that Room #800 has an alert. The care giver can examine the patient's information and prior history by clicking the "i" in the blue circle. Click on the Exit button to return to the previous screen.

Alerts shown in this screen can also be sorted by Room No., Sensor Type (PressureAlert, then CallAlert), Duration (from the longest alert to the shortest alert), and by Patient Name.

The information under "Sensor Summary" provides a quick glance of alerts that took place previously. "Total Alerts" provides a summary of current open alerts, while "Alerts Attended" provides a summary that has been attended and reset.

4. The following is the subsequent screen that will pop up. It provides the details of the patients' prior alert history. (Note the history available includes only those that were attended by the care givers. The history does not include current alerts that are yet to be attended.)

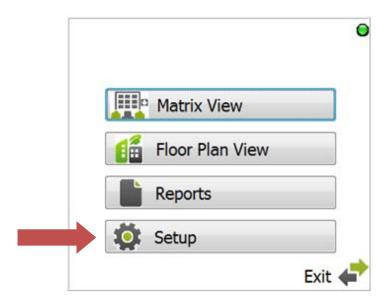
Return to the previous screen by clicking on the "Exit" button on the lower right corner of the screen.

Note: The "Report" button is disabled at this software release.

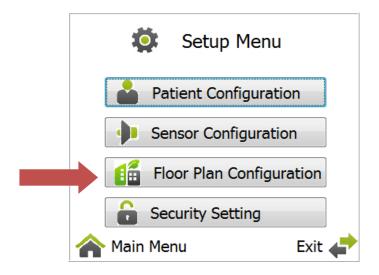


Running the Software - Floor Plan View

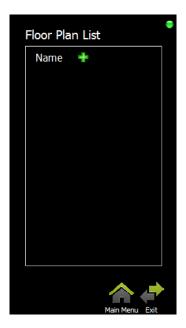
- 1. Again, there are two ways to monitor patients' status. The "Matrix View" allows the alerts to be shown on a grid display. The "Floor Plan View" allows the alerts to be overlaid on top of a floor plan image. This section explains how the Floor Plan View is configured and used.
- 2. Click on the "Setup" button on the Main Menu.



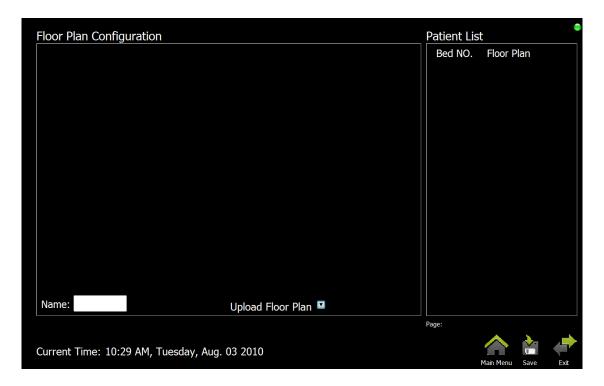
3. Click on the "Floor Plan Configuration" button on the Setup Menu.



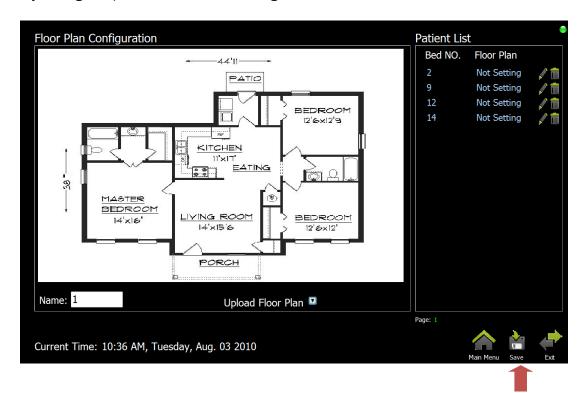
4. If this is a first time installation, a screen similar to the one below will be presented. Click on the Green plus sign "+" to create a new floor plan profile.



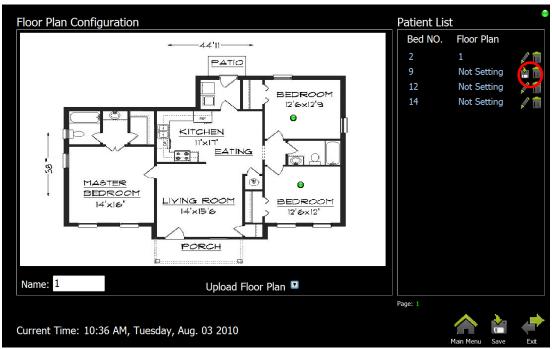
5. The Floor Plan Configuration screen similar to the one below will be shown. First, enter the floor name (numbers only) in the Name field. Second, click the down arrow next to "Upload Floor Plan" to include an image of the floor plan image.



6. The Floor Plan Configuration screen similar to the one below will be shown. Click the "Save" button at the lower right corner. Once the floor plan image is saved, a list of the available sensors (previously configured) will be shown on the right of the screen.



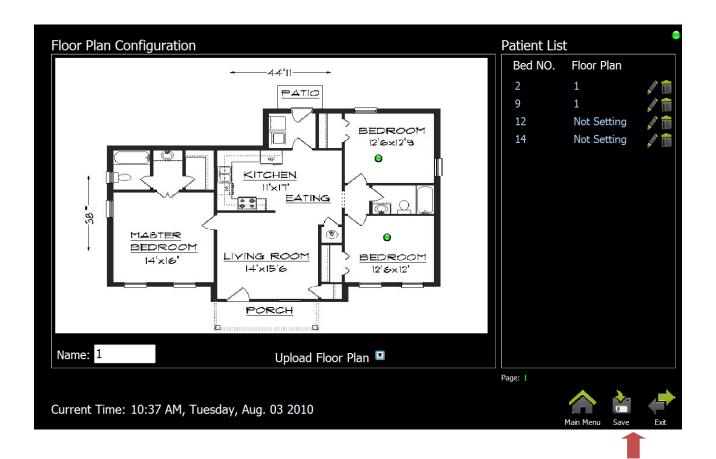
7. The goal now is to position the pre-configured sensors onto to the floor plan. Click on next to the sensor to go to the edit mode (denoted with the changing into the symbol).



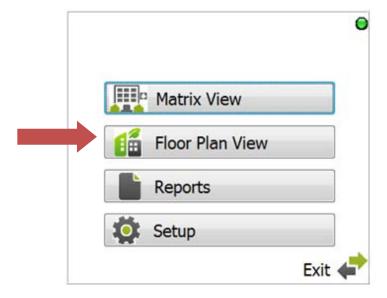
8. To position the sensor onto the floor plan, simply move the mouse cursor onto the desired location. Left click on the mouse. A green dot will then be visible on the floor plan. This green dot can be moved at this time by simply moving the mouse cursor to another desired location and left click on the mouse again. Repeat this step if necessary. Once the location of the sensor is

satisfactory, click on the symbol next to the sensor to save this record. Repeat the steps

above and place the rest of the sensors on the floor plan. When done, click on the lower right corner of the screen to save this floor plan.



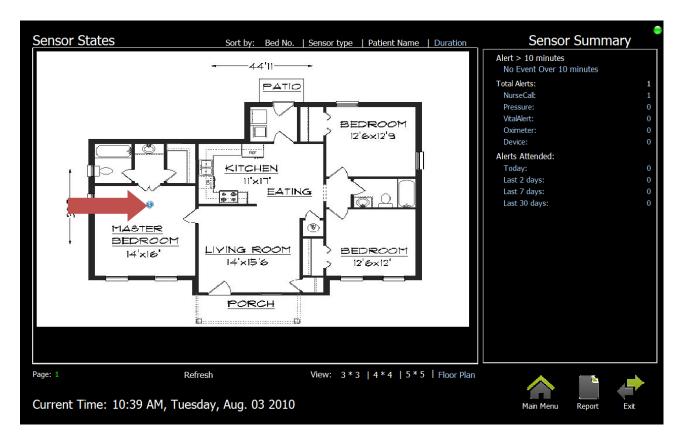
9. There are two ways to view the sensor status on the Floor Plan View. The first method is to select the Floor Plan View from the Main Menu.



10. The second method is to click on the Floor Plan View from the Matrix / Grid View as shown below. (Note that this method is disabled if there're no active alerts.)



11. When an alert is trigger, an alarm in the corresponding symbol will be shown on the floor plan similar to the one shown below.



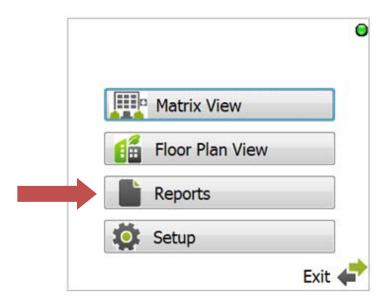
12. Clicking the alert symbol brings up the patient information screen as shown below.



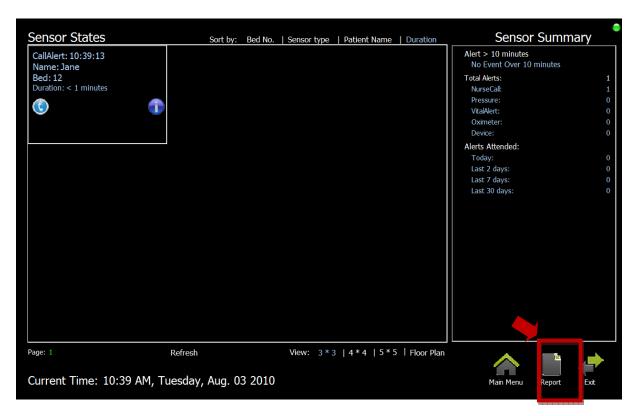
Running the Software - Reports

1. NurseVue software allows the alert records to be available in report format. There are a variety of pre-configured reports available.

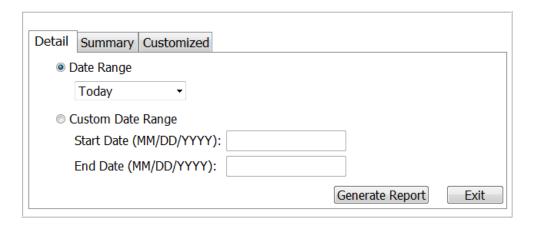
NurseVue provides two methods to access these reports. The first method is to select "Reports" from the Main Menu.



The second method is to click on the "Report" icon from the Matrix View or Floor Plan View in the NurseVue Software.



2. First, detailed reports are available from the "Detail" tab of the screen as shown below. The date range can be selected from the pre-configured list (Today, Last 24 Hours, Current Week, Last 7 days, Current Month, Last 30 days, Year to Date) or via custom date input.



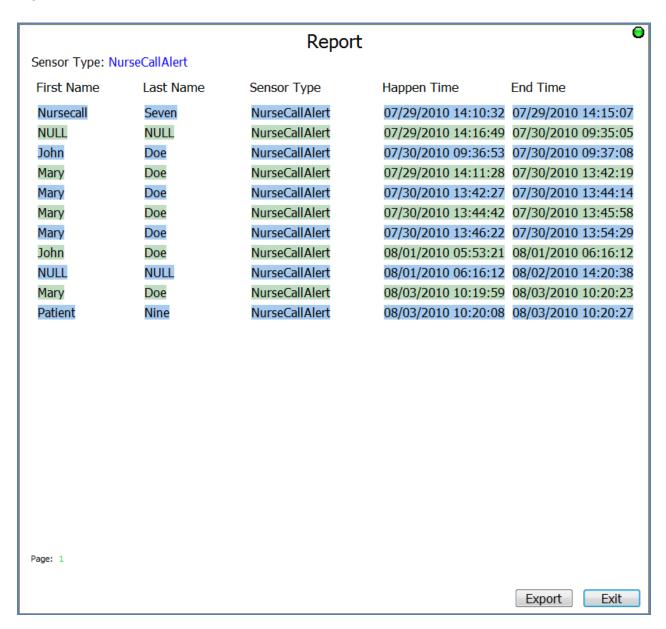
3. Once the desired date range is selected, click on the Generate Report button to view the report on the screen. The report below is a sample. Click on the "Export" button on the lower right of the screen to export the report into an external file.

		Repor	t	(
Detail Search: La	ast 7 days			
Start Date: 07/28/2010 End Date: 08/04/2010				
First Name	Last Name	Sensor Type	Happen Time	End Time
Nursecall	Seven	NurseCallAlert	07/29/2010 14:10:3	2 07/29/2010 14:15:07
Respironics	Vision	NurseCallAlert	07/29/2010 14:11:2	8 07/29/2010 14:22:44
Respironics	Vision	NurseCallAlert	07/29/2010 14:26:1	07/29/2010 14:26:29
Respironics	Vision	NurseCallAlert	07/29/2010 14:27:5	3 07/29/2010 14:27:55
NULL	NULL	NurseCallAlert	07/29/2010 14:16:4	9 07/30/2010 09:35:05
John	Doe	NurseCallAlert	07/30/2010 09:36:5	3 07/30/2010 09:37:08
Respironics	Vision	NurseCallAlert	07/30/2010 09:38:3	8 07/30/2010 09:38:41
Respironics	Vision	NurseCallAlert	07/30/2010 13:38:4	8 07/30/2010 13:38:52
Mary	Doe	NurseCallAlert	07/29/2010 14:11:2	8 07/30/2010 13:42:19
Mary	Doe	NurseCallAlert	07/30/2010 13:42:2	7 07/30/2010 13:44:14
Mary	Doe	NurseCallAlert	07/30/2010 13:44:4	2 07/30/2010 13:45:58
Respironics	Vision	NurseCallAlert	07/30/2010 13:46:3	7 07/30/2010 13:47:29
Mary	Doe	NurseCallAlert	07/30/2010 13:46:2	07/30/2010 13:54:29
Respironics	Vision	NurseCallAlert	07/30/2010 13:56:5	7 07/30/2010 13:58:51
John	Doe	NurseCallAlert	08/01/2010 05:53:2	1 08/01/2010 06:16:12
Respironics	Vision	NurseCallAlert	08/02/2010 06:29:1	3 08/02/2010 06:29:19
Respironics	Vision	NurseCallAlert	08/02/2010 13:03:0	4 08/02/2010 13:03:08
NULL	NULL	NurseCallAlert	08/01/2010 06:16:1	2 08/02/2010 14:20:38
Respironics	Vision	NurseCallAlert	08/02/2010 14:27:2	9 08/02/2010 14:27:33
Respironics	Vision	NurseCallAlert	08/03/2010 08:54:3	08/03/2010 08:54:36
Mary	Doe	NurseCallAlert	08/03/2010 10:19:5	9 08/03/2010 10:20:23
Patient	Nine	NurseCallAlert	08/03/2010 10:20:0	8 08/03/2010 10:20:27
Page: 1				
				Export

4. Secondly, summary reports are available under the "Summary" tab. These reports are sorted by "Sensor Types", "Bed Numbers", "Patient Name", or by Date / Time.

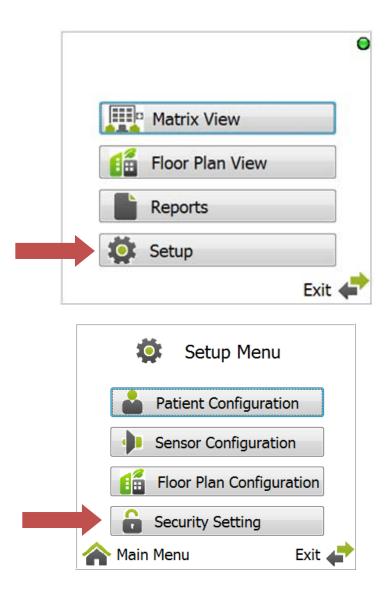
Detail Summary Customized			•
Sensor Type NurseCallAlert Bed NO.	□ Time Start: End:	Date(MM/DD/YYYY)	Time(hh:mm:ss)
☐ Patient Name		Generate R	leport Exit

5. Once the desired parameters are selected, click on the Generate Report button to view the report on the screen. The report below is a sample using "NurseCall Alert" as the search criteria. Click on the "Export" button on the lower right of the screen to export the report into an external file.



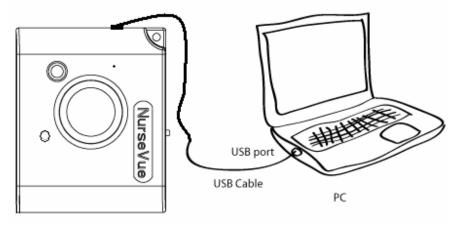
Security Settings

This feature is unavailable at this software release. Please check with your At Box representative for software updates.



Setting Notice

The transmitter can also connect to PC by USB cable.



Security Settings

This feature is unavailable at this software release. Please check with your At Box representative for software updates.

The transimitter can communicate with PC, and it can check the report as receiver.

Troubleshooting:

Problem	Possible Causes	Solutions / Workarounds / Notes	
Transmitter ID does not show up in the "Sensor Configuration" screen	Transmitter was not turned on properly	 Repeat Step 5 on page 14. Make sure the LED status is consistent with what's described in the step. 	
	Receiver is not properly connected to the PC	 Exit the software then re-launch the software. Disconnect the USB cable from the receiver. On the upper right corner of software's Main Menu, the dot should be red. Reconnect the USB cable to the PC and the receiver. Make sure the dot on Main Menu's upper right corner turns green! This indicates the receiver is properly connected to the PC. 	
	Transmitters are outside the range of receiver	 Turn off all NurseVue units: transmitters > routers > receiver (unplug the USB cable) Connect the receiver to the PC. Place NurseVue router in between the transmitters and the receiver using the guidelines described in p.10. Turn on the transmitters one at a time using the steps described in Step 5 on page 14. Make sure the LED status is consistent with what's described in the step. 	
Device alerts are not shown on the "Matrix View"	Sensor Function is not set up correctly	 Repeat step #2~7 in the Software Installation section. Then repeat step #10~11 and make sure the "Save" button is clicked after assigning the 'sensor function' to the patient. 	
	Transmitters are outside the range of receiver	 Use and place a NurseVue router in between the transmitter and the receiver using the guidelines described in p.10. 	
	Transmitters are outside the range of receiver	 Turn off all NurseVue units: transmitters > routers > receiver (unplug the USB cable) Connect the receiver to the PC. Place NurseVue router in between the transmitters and the receiver using the guidelines described in p.10. Turn on the transmitters one at a time using the steps described in Step 5 on page 14. Make sure the LED status is consistent with what's described in the step. 	

FCC Requirement

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Do not make any changes or modifications to the equipment unless otherwise specified in the instructions. If such changes or modifications should be made, you could be required to stop operation of the equipment.

This device can be expected to comply with part 15 of the FCC Rules provided it is assembled in exact accordance with the instructions provided with this kit.

Operation is subject to the following 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.

M/N: NV-TX100

FCC ID: ZLLNV-TX100

Contains FCC ID (ZigBee module): TYOJN5148M0

M/N: NV-TRUX100

FCC ID: ZLLNV-TRUX100

Contains FCC ID (ZigBee module): TYOJN5148M3



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