

# **Training with VeeSim**

## **Incorporating VeeSim in to Chief Fire Warden Training**

### **Introduction**

When fire safety instructors perform EWIS panel training they often cannot use the installed EWIS panel. The reason is simply because if Alert and Evacuation tones are activated they will cause significant disruption within the building.

VeeSim overcomes this issue by

- providing a simulated EWIS panel for training
- creating the foundation for delivering competency based evacuation training and assessment
- addressing the current training shortfall in fire warden training

Using VeeSim, trainees can experience operating the EWIS panel during a simulated emergency and repeat the training until they become competent. Furthermore, VeeSim can be used to maintain competency in trained staff by providing regular repetition and reinforcement of the training.

### **What is VeeSim?**

VeeSim is a software programmed Emergency Evacuation Simulator that simulates a Simplex EWIS panel and fire warden interaction during a simulated emergency.

### **Who should use VeeSim?**

VeeSim has been designed to be used by any organisation that is responsible for ensuring fire warden training and competency. Some example are:

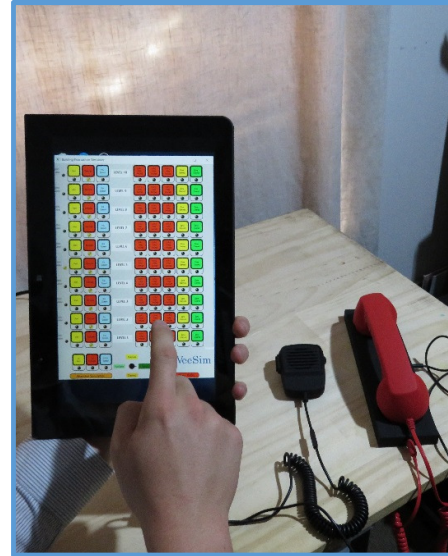
- Fire safety instructors during fire warden and chief fire warden training
- Building owners and managers to train building management staff who act as chief fire wardens
- Security companies for training building security managers and controllers
- Hospital, University and Shopping mall management to ensure fire warden competency

### What computer hardware is required ?

VeeSim currently runs on the Windows operating system on desktop, laptop and tablet computers. VeeSim is also being converted to run under the Android and Apple IOS operating systems.

VeeSim can simulate a maximum of 25 levels or zones with 3 active WIP phones. To simulate maximum floors, a computer with a connected 1920 x 1080 resolution touch screen monitor is required. A monitor size of 24 inches or greater is recommended.

On a Windows 10 inch tablet 10 levels can be simulated with 3 active WIP phones.

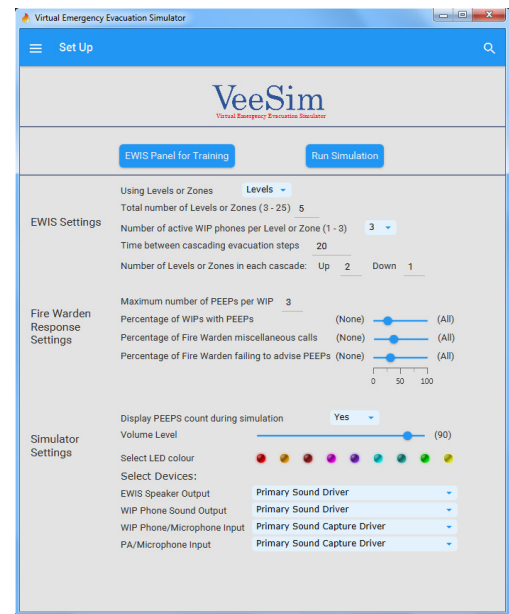


### Simulation Settings

Instructors use the VeeSim setup screen to set the parameters for the building environment and warden response for the next simulation.

At the heart of VeeSim is the Warden Organisation and Response Settings (WORS) engine. The WORS governs building environment settings and how the wardens will respond during the emergency by allowing the instructor to set:

- Number of zones
- Number of WIP Phones per zone
- Cascade Times
- Cascade Sequence
- Number of PEEPs per WIP
- Percentage of WIPS with PEEPs
- Percentage of fire warden miscellaneous calls
- Percentage of fire wardens failing to advise PEEPs.



The WORS engine also calculates warden behavior:

- Level evacuation timing
- Level reporting sequence
- Miscellaneous call location
- Miscellaneous call timing
- Wardens failing to advise PEEPs locations
- Wait times

By using VeeSim the instructor can:

- Introduce the trainee to basic EWIS Panel operations
- Train how to operate the EWIS panel in line with documented evacuation procedures
- Introduce the trainee to a simulated emergency evacuation
- Advise on the use of manual and automated EWIS Panel modes
- Train on partial and full building evacuations
- Escalate simulation size and complexity by varying building size and warden response
- Address training for a variety of situations: fire, earthquake, gas leak, weather events, unknown substances etc
- Test and report on warden competency using the VeeSim report

### **How many available Levels / Zones are required in the simulator?**

VeeSim can simulate a maximum of 25 levels / Zones with 3 WIPs active. Your building size will depend on the number of Levels / Zones required.

Our experience shows that the evacuation competency is a scalable skill. I.e. Once a chief fire warden can successfully evacuate a number of floors they should be able to scale that skill level to 3 to 4 times the number of floors.

For example: A chief fire warden who can successfully evacuate 10 levels with 3 active WIPs per level should be able to manage a maximum of 30 to 40 levels with 3 active WIPs per level, depending on the level of competence and ability of the person to manage the evacuation.

Similarly a warden who can successfully evacuate 25 levels with 3 WIP actives per level should be able to manage 50-100 levels with 3 WIPs active per level.

Training for buildings 25 levels / Zones and under can obtain the exact number of levels using VeeSim but it must be understood that the evacuation competency is scalable so for larger buildings a smaller number of levels can be used.

NOTE: A 50 level / zone version of VeeSim is currently being developed.

### **How do I integrate VeeSim into the fire warden training course?**

As part of chief fire warden training staff would be expected to know the following:

- Location of the fire control room
- Location of PEEPS information folder
- The Fire Information Panel (FIP), isolations and alarms
- The EWIS Panel
- Location of a MIMIC EWIS panel if available
- Building evacuation documentation / procedures including
  - WIP phone language and use
  - PA System messaging
  - Required PA announcements during emergency
  - Documentation requirements
  - Emergency exits and gathering points
- Specific building level / zone information that may include
  - empty levels
  - plant room only levels
  - Levels occupied 24/7
  - Security / limited access levels
  - Levels with high PEEP counts

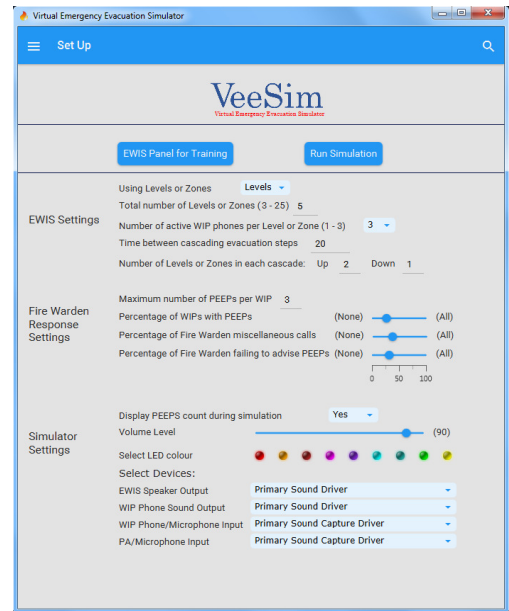
Other factors may be important and will vary from building to building.

Each building will have a unique set of procedures based on building design, level of occupation and tenant use. Based on trainee knowledge of the above being part of the chief fire warden training, VeeSim can now be introduced to the training syllabus.

## Step One – Set up VeeSim Simulation

Firstly, use the VeeSim setup screen to configure the number of floors required for an introduction to the EWIS Panel in the building.

For buildings with a number of zones greater than 25 display the maximum, 25 Zones. Buildings with less floors can have the exact number of zones displayed.



## Step Two – Introduce trainee to VeeSim

Use the **EWIS Panel for Training** button on the setup screen to display the EWIS panel configured. In the example here we have shown 10 levels.

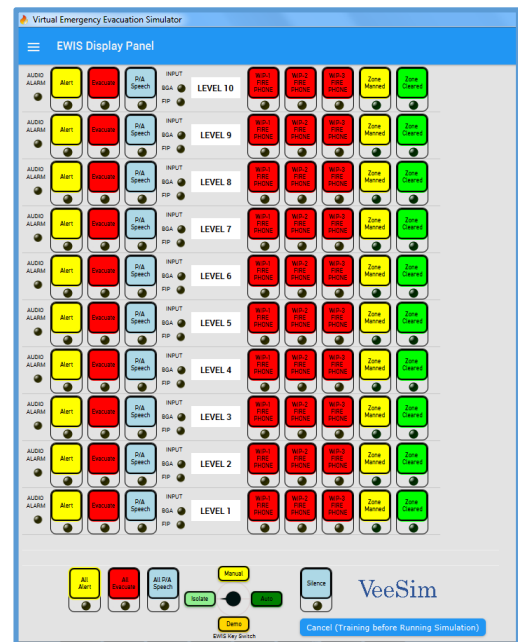
The trainee can now be introduced to the EWIS panel with explanation of each button, its function and use. Buttons can be activated on or off without affecting any simulation or, most importantly, the building and its tenants.

The EWIS Panel will be in ISOLATE mode and no warden interaction will occur.

At this time the Building Evacuation Procedures should be referred to with VeeSim to understand the building requirements when it comes to managing an evacuation.

It should be explained that while the ISOLATE / MANUAL / AUTO switch is a touch switch on the simulator it is a KEY SWITCH on the real EWIS panel.

The DEMO mode on VeeSim can be used to show how the simulator works in AUTO mode with the system stepping through the escalation and each fire warden reporting in. No interaction is required in DEMO mode.



The trainee can also be introduced to the Public Address (PA) handset and the WIP Phone at this stage. VeeSim simulates both of these devices by connecting a mobile phone telephone handset and a CB Radio handset to the audio part of the computer. (See picture at right)

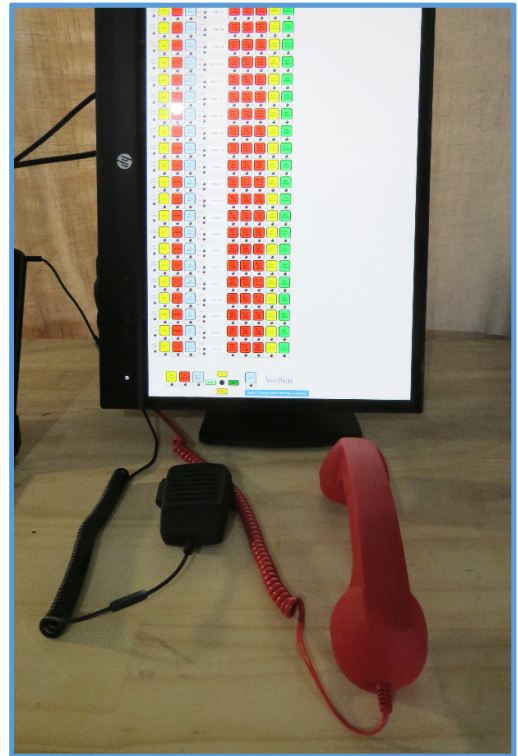
Many buildings have PA announcement requirements and VeeSim will record and report the time each zone has the PA button switched on and off.

Note: These devices are not mandatory but are an essential part of the simulator, just as they are in the EWIS system. Trainees must be able to use the devices on a real EWIS panel and being able to use the devices on the simulator is key to the training.

The handsets allow the evaluation of the students ability to use the correct language in both announcements and warden interaction.

Just like in a flight simulator used to test pilots the controls are not connected to a real airplane, the pilots are required to treat the simulation as real and will fail qualification if they cannot successfully operate the plane. VeeSim should be treated in the same manner.

Both handsets will receive the audio from the computer and can be used to listen to the Fire Warden reports as they are reported. As stated, even though there is no one at the end of the phone trainees should still respond to calls as they would with a real WIP phone call. When the P/A handset is used to make announcements trainees should use the attached CB radio handset as though they are making a real building announcement. Using the handsets help provide a full simulator experience that helps the training become more "real" for the participants. Just like any activity practicing with VeeSim provides experience that is just the same as using both handsets for real evacuations.



### Step Three – Set Simulator and PEEPs Display

Once the introduction has been completed the simulator can be setup for the first simulator run. Use the setup screen to set the number of levels etc for the simulator run. Definitions of each setting can be found in the Frequently Asked Questions within VeeSim.

One of the key settings to help training is the Display PEEPs count

When this selection is YES, the automatic PEEPs count field will display the number of PEEPs reported from each WIP phone during a simulation. This number is displayed once the fire warden for each WIP phone has reported in.

The number of PEEPs is shown on the right hand side of the VeeSim simulation screen on the same level as the WIP phone that has reported the number of PEEPs. In the screen print on the right we can see that the Chief Fire Warden has not obtained the PEEPs count for a number of zones.

Some zones reported in but did not provide the PEEPs count, this is identified by the question mark. Other zones calls were not answered in time and this is indicated by no figure in the field. A detailed description can be found in the FAQs.

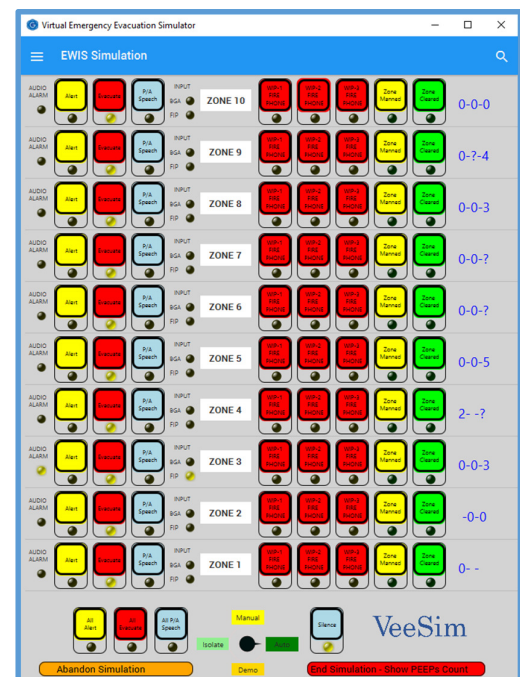
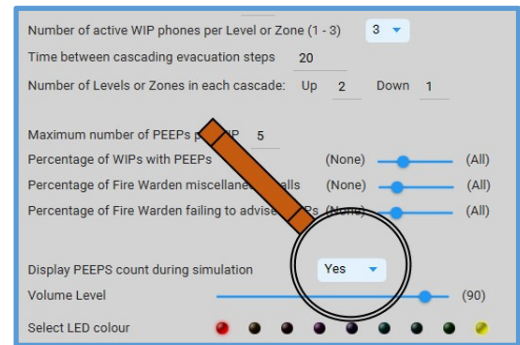
Setting the PEEPs count to YES allows the trainee to easily keep track of the WIP phones that have been answered and the number of PEEPs that have been reported. While this is helpful during training, when testing the trainee during an evacuation simulation, the PEEPs count should be set to NO.

The default setting is NO. When set to NO, the PEEPs count will display on the simulation screen to the right of the EWIS panel when the ""End Simulation (Prepare Report)"" button is pressed.

The PEEPs count for all WIPs is also shown on the Report. The setting cannot be changed while the current Training or Simulation is in progress.

When the system automatically evacuates the building it will automatically ALERT then EVACUATE according to the preset cascade sequence such as two levels above and one level below the level that triggered the alarm. This should be set to match the EWIS panel in your building by adjusting the values on the setup page.

NOTE: During training, the trainee should be taught the in-house techniques used to record the PEEPs count per WIP phone, and this number should be compared with the simulator PEEPs count at the end of the simulation to check on the trainee accuracy.





#### Step Four - Run Simulation in AUTO Mode

Configure VeeSim with 5 to 10 of the zones your license supports and 1 WIP active. Set the cascade time, cascade sequence, maximum PEEPS to none, Display PEEPS to YES and the Percentage fields to NONE.

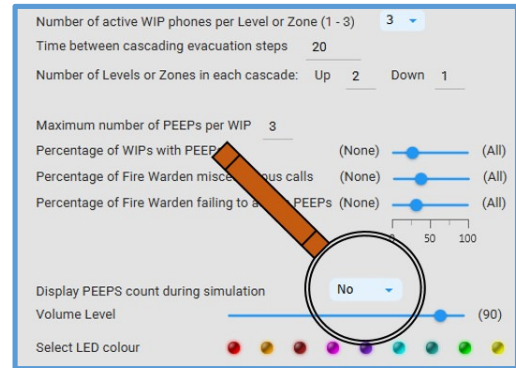
Run the simulation.

Work with the trainee to understand the evacuation procedure requirements and complete the evacuation.

Once a the trainee demonstrates a full understanding of the EWIS panel and can successfully complete the simulation raise the Number of PEEPS per WIP and the percentage sliders to create a more complex and interactive environment for the trainee to experience.

Once competent with one WIP raise WIPS to two and three as appropriate for your building.

Also once the trainee becomes competent with recording the number of PEEPs per floor set the "Display PEEPs count to NO.

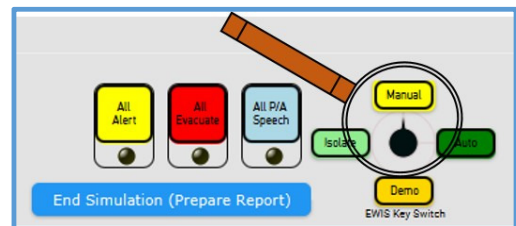


When competent on the maximum number of WIPs required for your building, raise zones to 75%, and once competent at this level raise again to 100% of your maximum license zones.

#### Step Five - Run Simulation in MANUAL Mode

AUTO mode is the default setting for EWIS panels active within a building but the chief fire warden should be capable of running the EWIS Panel in Manual Mode.

This is required as on many occasions only a partial evacuation may be required.



Also many buildings have a policy of placing the EWIS panel into manual mode once an alarm has sounded to enable information to be gathered on the nature of the alarm and a decision taken as to the evacuation required.

Manual mode requires a higher degree of concentration and record taking (alert and evacuate times, cleared floors, PEEP counts, time of clearance) to ensure a successful evacuation. Training in manual mode also allows instructors to use VeeSim to train staff in the response to a range of emergencies such as gas leaks, floods, etc which may not require a full building evacuation, or earthquakes which may lead to a spontaneous tenant initiated evacuation but still leaves PEEPs to be evacuated.



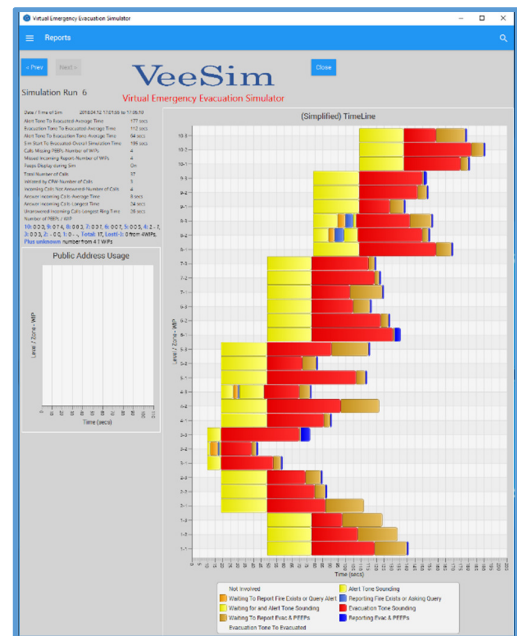
## Step Six – Report, Review, Train

Once a simulation has been completed you can view the report for that simulation and compare the information recorded by the trainee with the simulation results.

Once the trainee can perform a full building evacuation on the simulator with no errors then they can be considered competent.

Your measure of success should include the ability to

- Manage all calls from fire wardens
- Communicate in a succinct and clear manner to fire wardens
- Note all PEEP counts
- Document all information required by your evacuation procedures
- Perform all PA announcements required in a timely manner
- Successfully evacuate the building
- Successfully complete all building specific procedures included in your building evacuation plan



Trainee reports should be retained and stored for audit and compliance purposes

Note: Trainees should be retrained regularly as per building compliance requirements. We recommend VeeSim retraining at least every 6 months.

For further information on VeeSim or to download a trial copy of the simulator go to [www.veesim.com](http://www.veesim.com) or email us at [info@veesim.com](mailto:info@veesim.com)