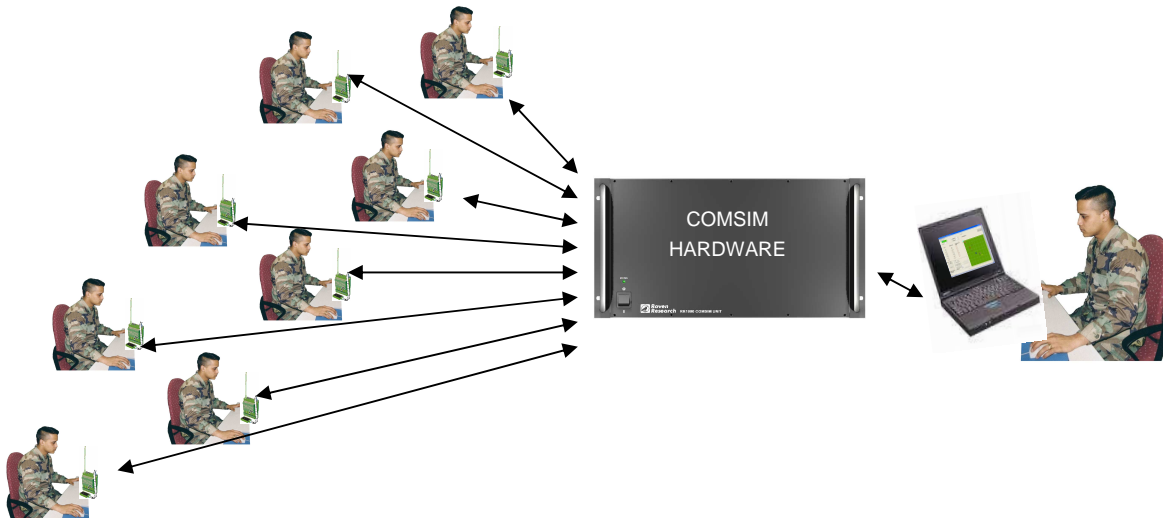


ComSim - Radio Training Simulator

- **Combat Net Radio Training Aid – Using the Actual Radios**
- **Controlled Environment – Classroom**
- **Simultaneous Automatic Attenuation Setting for All Paths**
- **Battlefield Communications Simulator**
- **Radiation Free Training**
- **Field Trial Simulator**
- **PC Controlled**
- **Repeatable Training Exercises**
- **Use interactive 3D Terrain Maps**



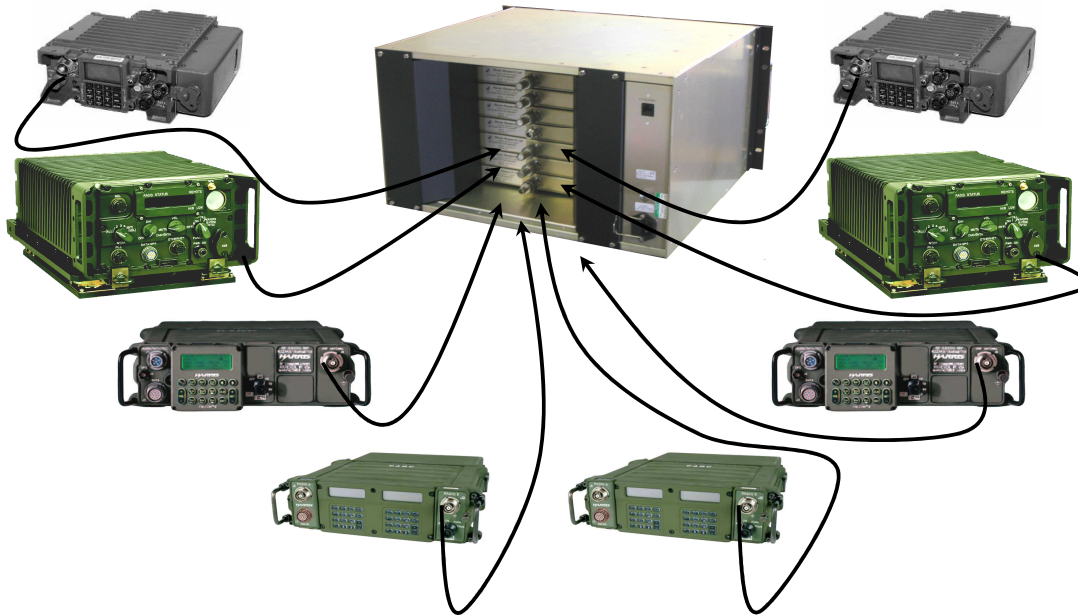
Raven Research Ltd has designed and developed a radio training simulator for use with a broad range of different radio types and models. The purpose of the product is to allow organisations to carryout **training** and retraining in a **controlled environment** allowing the radio operators to use their **actual radios** without any risk of radiation hazard. It allows a single supervisor using a PC, to control the radio environment by either automatically or manually setting attenuation levels simultaneously between individual radios. The controller can also introduce 'jamming' signals into the test scenario to simulate the presence of rogue signals.

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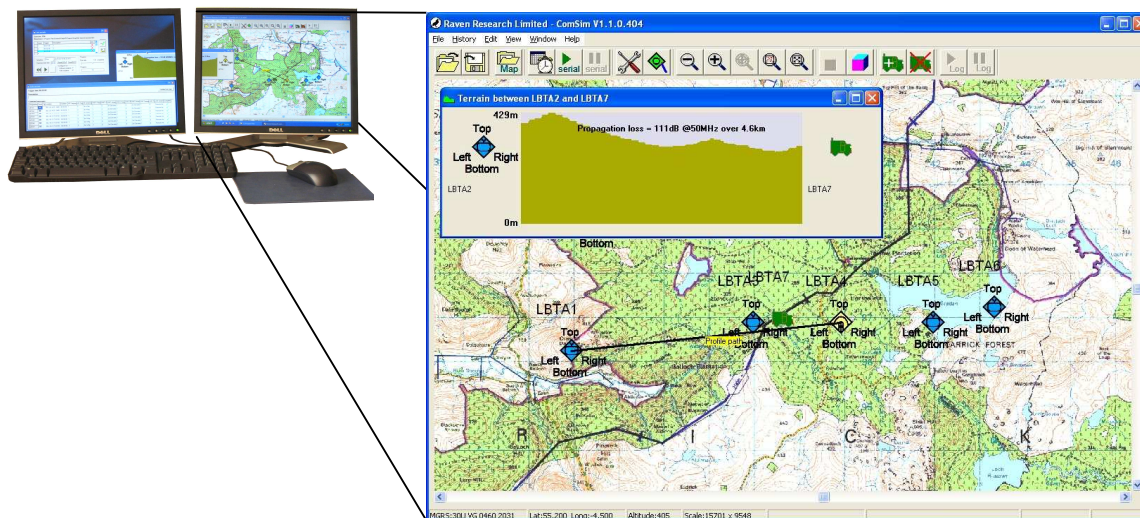
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The simulator works by connecting the RF signal from several operators' radios, via suitable attenuators, directly to the propagation matrix, as shown below:



The controller, using a PC connected to the propagation matrix, is able to move a virtual marker indicating the positions of each radio on a map, to simulate the separation between units, as shown below:



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The software then calculates the expected path loss between radios and places this level of attenuation between each of the paths in the test. The operators will then be given various tasks to exercise their knowledge of the radios and the network in which they find themselves.

A sequence can also be programmed into a test where one or more radios are moved automatically over time, simulating for example a vehicle driving through a fixed combat network and looking at the effect of routing the signals around the network.

The great **benefit** of this type of training is that the radio operators can be under constant **supervision**, if required. Several exercises can be carried out in a very short space of time, compared to taking the operators outside in a real field trial test where close supervision is either difficult or expensive. Owing to this great **cost savings** can be made and training times can be reduced.

As an option, the controller can communicate with each operator independently, giving them instructions, either via a text-based message, or by sending specific instructions, for example indicating the weather conditions. This is done using the built-in software on the controller's PC, which is connected to the operators' "Data Entry Device", as shown below:



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The system can be integrated into either a vehicle, shelter or classroom environment.



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HF/VHF or V/UHF COMSIM Products

Matrix Specification	Parameter		
Number of Radio Port Connections	4 to 9	10 to 13	14 to 17
Frequency Range	1.5-110MHz or 20-500MHz	1.5-100MHz or 20-500MHz	1.5-100MHz or 20-500MHz
Available Variable Attenuation	>100dB	>100dB	>100dB
Maximum Input Power	30dBm	30dBm	33dBm
Matrix Dimension	6U high	9U high	12U high
Impedance	50Ω		
Power Requirements	AC Mains 100-230V, 50-60Hz		
Control	Remote control only via 10BaseT Ethernet		