

# HAMNET

BLACKOUT 2018

**Team Manual**

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## **Background**

The exercise is designed to simulate the communication challenges of a national disaster. Teams will get tasks – either a message to transmit or a GPS location to identify, or something similar. The end goal is to get the messages/information through in any way possible (within the restraints of the exercise) and as accurately as possible.

Teams need to be ready, to be completely self-sufficient, and to operate for the 24 hour period without any assistance from the outside.. Teams must be completely off the power grid – not only radios but lighting and cooking as well. Battery power, supported by solar, wind, portable generators etc. may be used to charge the batteries. No use of the mains power is allowed.

Teams will consist of two units – an in town “VHF team” and an out of town “HF team”. You can find out more about the team composition in a later section.

During the exercise, your team will be asked to relay messages. It is of the utmost importance that messages get relayed verbatim. In an emergency situation, sending unreliable messages can lead to chaos and poor decisions. Please note that all tasks and messages will have a reference number with them and this number needs to be relayed correctly along with the message.

In addition to messages, you will be given tasks to perform. This is similar to sending messages, except that the message will need to be worked out by your team and the “answer” sent as the message. A typical example will be getting coordinates on a known object, or the name of an object given it's coordinates. Once again the reference number is of paramount importance as without it the message cannot be captured by the destination team's VHF unit.

Just to keep you busy, you may get a few challenges thrown in as well. Challenges are meant to be fun and inventive, so enjoy them!

There is a complete section on activities later on and it covers in more detail the messages, tasks and challenges.

### ***No information from which to start!***

An important aspect of the exercise is the dynamic nature of the teams and their capabilities. You will not get a list of other teams, nor a list of frequencies! As in a real emergency situation, you will set up your station and then attempt to find other stations. When you find other stations, find out what capabilities (like bands/modes) they have available and share your details with them as well. As you find other teams, help spread the word about teams you have found and help to grow the network of teams. The standard HAMNET frequencies are a good place to start.

At the start of the exercise, you may get a message for a team you don't know. You are free to ask for help from other teams and the intention is that the teams work on a “plug and play” system – getting to know all the stations and the best routing methods for messages to them.

### ***The message sending process***

The VHF units will be monitoring the website [www.eyedead.co.za/blackout/team.php](http://www.eyedead.co.za/blackout/team.php) with their username and password. This will give you access to any new messages you need to *send*, tasks you need to perform, or any challenges. When you *receive* a message from another team, you will log the message in on this screen too.

VHF units will be monitoring the site. Lets say the Port Elizabeth (PE) VHF unit get a message to send to Arrow Park(AP).

The process would be:

PE VHF gets the message from the website.

PE VHF send the message to PE HF

PE HF send the message to AP HF

AP HF send the message to AP VHF who log the message on the site, completing the task.

## **Team composition**

Teams must consist of two units: a VHF\* unit “In Town” who will need internet access to receive and complete tasks and an HF team located out of town with communication to other HF stations around the country. The idea is that the in town team is in contact with their out of town team via VHF/UHF. For brevity, we will refer to them as the VHF (in town) and HF (out of town) units of the same team.

Each team must have a Hamnet member as Team Leader. Teams should range between 4 and 8 members in size, with at least 2 members per unit. Teams are encouraged to invite non Hamnet members to be on the team as this is a great marketing opportunity and a very likely situation in the case of a genuine disaster.

\*While the unit is referred to as the VHF unit, UHF communication between units in the same team is acceptable.

## ***Functions of the team units***

### **VFH Unit**

The VHF unit is responsible for getting messages and tasks from the website and communicating these to the HF team.

In the case of a task, the VHF team is allowed to assist in the task, but the HF team must get the task from the VHF unit. That is to say the task must be communicated to the HF unit.

When a message is received by the HF team (from another HF team), the message (or task “answer”) will be sent to the VHF unit for capturing onto the website.

### **Getting messages from the web**

Monitoring the website [www.eyedea.co.za/blackout/team.php](http://www.eyedea.co.za/blackout/team.php) – with your team user name and password entered, will allow you to receive any new messages (or tasks) from the exercise director.

The message (or task) will contain a reference number, a message or task, and a destination team. You need to send this information to the HF team who must send the message (or task answer) to the team mentioned, along with the reference number.

### **Posting a received message**

When your HF team receives a message from another HF team, they will convey the message to you and you will capture the message along with the message reference number. On the same website, you will see a place to enter a received message. Select the originating team from the drop down, enter the reference and the message and click *Post*.

### **HF Unit**

The HF unit is intended to be the long-leg for sending messages. They will receive the message or task, along with the destination team and reference number from their VHF unit. They will (with the optional help from the VHF unit) complete the task. The message (or task answer) is then relayed to the destination team's HF unit who will then pass it on to their VHF unit for website capture.

It might happen that your message needs to be relayed via a third party. In this case make sure the destination team is aware of the originating team's name so that they can close the task on the web.

## How to register

Go to [www.eyedeal.co.za/blackout](http://www.eyedeal.co.za/blackout) and follow the link to register teams. Once you have verified that your team is not yet registered, go ahead and complete the entry form below the table and click the Register button.

All you need to register is your team name, a team liaison and a cell phone number. You will be added to the list of teams and your entry will be finalised. You will then be added to a WhatsApp group. Please make sure that the cellphone number given is one of your VHF Unit who will be in constant contact during the exercise. Should your team need to go off the air during the exercise, please notify the ED and other teams by posting this information to the WhatsApp group. Naturally, WhatsApp can not be used to send the messages as part of the exercise and is intended only for notifications.

Only one entry per team is required. If you are a member of a team, please check that your team has been registered (your registration is final when you are added to the list of teams). Please do not register your team if someone has already done so.

Should you experience any issues, please contact Dave Higgs on [om@zs2dh.co.za](mailto:om@zs2dh.co.za)

## **Activities during the exercise**

At random times in the exercise, the Exercise Director (ED) may issue messages to transmit, tasks to perform, or challenges.

### ***Messages***

Your team will be given messages to transmit to another team. These messages need to be relayed verbatim, along with their reference number and captured by the receiving team. Where needed, messages may be relayed via another team, so do make sure you have the correct team as the originator for the message – your VHF unit will need the correct starting team in order to close the task for them.

### ***Tasks***

At ED's sole discretion, you might be allocated tasks. A typical one would be for instance to locate a landmark on a map given the GPS location, or to give the GPS coordinates of a known landmark.

In the case of a task, the VHF unit will pick up the instruction, relay to the HF unit and together perform the task. The task will result in a “message” of some sort – coordinates, a name, etc. and this message then needs to be relayed to the designated team.

#### **Example:**

Lets say ED posts a task for PE to send to Arrow Park.

PE VHF get the task from the website - “What is the GPS location (DMS) of point 'A'?”

PE VHF send to PE HF and together they locate point 'A' and calculate the coordinates.

PE HF send these coordinates to AP HF

AP HF send them to AP VHF who log it as a normal message.

It is worth pointing out that AP do not know what the task was, so incorrect GPS coordinates, coordinates in the incorrect format, etc. will not be the responsibility of AP.

### ***Challenges***

Challenges, or spare time activities are activities you are asked to do to test your team's ability to adapt. This could be for instance to post a photo of your HF team online, or to compile a menu with food list for a team. The tasks, while intended to test your team, are meant to be fun and inventive.

# **Logistics and other considerations**

## ***Costs***

All costs incurred by your team – in both the VHF and HF units are for your teams account. Hamnet SA will not be sponsoring anything whatsoever. The costs of food and accommodation and any loss or damage to equipment is for your own account.

## ***Venues***

You will need to find a venue for you HF unit as well as your VHF unit. The VHF unit can be operated from one of the team's QTH. The VHF team needs to be off the power grid, but can operate from a residential location. The HF team should be camping or setup in a venue that is not the QTH of a team member and in an area where the HF antennae are not a danger to the public.

## ***Menu and cooking***

All meals must be prepared by the team (no outside catering) and must be prepared off the main power grid – gas, fire, solar, or even raw! Naturally, the units will cater separately and are independent of each other for the purposes of catering.

Apart from the lack of power, there is no further limitation.

## ***Power***

The exercise is intended to simulate a disaster in which there is large scale electrical outages, rendering the powering of radio equipment , lighting, and cooking to be off-grid. Off-Grid implies no usage of mains electricity at all. This includes not charging batteries from a mains charger during the exercise. You are free to use solar chargers, generators, wind turbines, etc., just no mains power!

The use of inverters is acceptable.

## ***Internet***

The VHF unit is required to have a stable internet connection. While ADSL is acceptable, a mobile internet connection would be preferred so as to reduce your reliance on vulnerable infrastructure such as copper wire.

The power limitation for being off grid includes the use of any routers or wifi access points. Running these on an inverter is acceptable.

Smart phones or tablets can be used as the internet connection – a laptop or desktop computer is not required, although can be used provided the power limitation is met.

The HF unit does not need an internet connection but should be in constant communication with their VHF team via VHF or UHF.

## **FAQ:**

### ***Who wins and how do we score?***

The exercise is not competitive and there will be no winner.

### ***What is the expectation of my team?***

The underlying requirement is that your team has fun. This is not a test or competition, but a great opportunity to get to know the strengths and weaknesses in your team without the need to feel bad or inferior in anyway. Nevertheless, accuracy in message transmission is paramount. You cannot be useful as an emergency communicator if you cannot get the message through accurately.

### ***What does it cost to enter?***

All the best things in life are free and we hope this will be one of the best weekends ever, so it too is free. That said, your team needs to meet any costs incurred by your team – such as accommodation, food, transport, fuel for the generator, etc..

### ***When is the closing date for entries?***

While we would like to have teams register early, the nature of the event allows entry *during* the event as well. In a normal disaster situation, hams will become available at different times and with different abilities (such as bands for example). When you register your team, no additional information is required. It is up to you to let other teams know what bands/modes you have available – and to keep them informed as this changes. When you setup your field station, start looking for other stations taking part in the exercise and tell them what capabilities you have and are expecting. The standard Hamnet frequencies are a good starting point. Also ask for other known teams and help spread the word.

### ***What bands/frequencies are to be used?***

You put out as many bands/modes as you can. Publish them to other teams and let the information filter down to other teams. Hamnet listed frequencies will be a good point to start. You need to establish communications with other teams and then notify them of your teams capabilities.

It maybe that your team can only operate on a frequency or frequencies not available to another team. In this case a relay path will need to be established between the teams. This relay is for you to find out and operate.

### ***Can we help other teams?***

Yes! This is the idea. If you hear a team trying to get a message through – you are welcome to assist. The basic idea is that the message **MUST** get through. We are all on the same side!

### ***Who is ED?***

ED is the Exercise Director and is the person posting the messages the VHF units are getting.