

# **Liberia 2007 - 5L2MS**

## **Arie Kleingeld, PA3A**

**(Edited for GDXF by Prof. Dr. Uwe Jaeger, DJ9HX)**



### **When & Where:**

Time in Liberia: 3 Oct – 24 Oct 2007  
Radio Operations: 5 Oct – 21 Oct 2007  
Location: ELWA Compound, Monrovia, Liberia

### **5L2MS team:**

Arie PA3A, Arie PA3AN, Henk PA3AWW and Ad PA8AD. Dickson EL2DT joined our team during our stay in Liberia.

### **The cause:**

1. Bringing out the good work of the Mercy Ships Organization (see below)
2. Sponsoring a little hospital, the Gaye Town Clinic, that is only just starting to operate in a country that was destroyed in a 13 year civil war and where peace keeping is done by the UN
3. Supporting the Liberia Radio Amateur Association (LRAA) with equipment to build a new club station

### **The used equipment, etc:**

It was a 4 men operation, limited budget for the dx-pedition itself (due to the cause), no monobanders, no super-transceivers, no 4-squares, no high towers.

Nine months of preparation brought us to that moment that we were really going on our expedition.

The journey started 3 Oct 2007 at 05:30 AM. The 5L2MS team assembled at Zaventem Airport, in Brussels, Belgium. Four men eager to go on a mission of Mercy using ham-radio as a means.

Lots of luggage to carry, three transceivers, two linears and other equipment... and some clothing of course. Luckily, bulky antennas, coax cables, generators, tower materials, ropes, beds, bed sheets, food, coffee machine, etc. (in total about 275 cubic feet) were already shipped to Liberia in a sea container.

### **Ready to go!**

### **So how come that this DX-pedition took place.**

It was Christmas 2006 that two hams, Henk PA3AWW and Arie PA3AN were talking about a voluntary job Arie did on board of a hospital ship, the m.v. Anastasis. This vessel is owned by an international organization called Mercy Ships. Mercy Ships provides humanitarian aid to countries with none or limited healthcare facilities by means of hospital ships. Crewmembers are all volunteers who come on board for a short or longer period. These people are skilled and work for free. They even pay for their stay on board.

After a while an idea came up. What if a DX-pedition could be combined with the good cause of Mercy Ships. Henk had done that before. He was a member of the 9G1AA DX-pedition in 1993. The expedition members were united in the DAGOE Foundation at that time (DAGOE – Dutch Amateurs Going On Expedition). They were able to sponsor the building of a complete recovery room for the Dormaa Hospital in Ghana, using the QSL money and sponsoring received from different ham radio organizations.



**The AFRICA MERCY**

In April 2007 the hospital ship m.v. Africa Mercy visited Rotterdam on her maiden voyage before leaving for Liberia. Mercy Ships and DAGOE came to an agreement on the DX-pedition and how it could contribute to the work of Mercy Ships. Besides promoting the work of Mercy Ships in general, DAGOE wanted to choose a shore based help project.

This project became the building of the Gaye Town Clinic. The Gaye Town Clinic was originally founded by a local Baptist Church in Gaye Town to improve healthcare for all local residents and to start an AIDS prevention program.

In partnership with Mercy Ships the clinic could be completed and staff was trained. A giant step forward if you know the situation in Liberia at this time. Liberia was torn apart by 13 years of civil war and is now starting to build a new future again.



UN troops are stationed to do the peace keeping. Up till now they are successful, but their job is not done yet. Besides the UN there are about 1500 NGO's (non governmental aid organizations) active. Getting some insurance for your luggage in Liberia is impossible. So,, nice place for a DX-pedition, huh?

#### **Arrival in Liberia.**

After a full day travel the team arrived at Robertson Airport Liberia. Rain was falling, temperature 29 degrees Centigrade and a humidity of 100%. That was a nice start.

October should be the beginning of the dry season but somehow somebody had forgotten that. We were picked up by the people of Mercy Ships and about two hours later we arrived on board the Africa Mercy, berthed in the harbor of Monrovia, Liberia.



**5L2MS and local Hams**

We received a warm welcome. After this, it soon became clear to us that the ship was a complete and well run hospital and a safe habitat for the crew. The medical treatment on board the Africa Mercy is done by a crew of more than 400 people.

Besides direct medical treatment the crew also works ashore empowering and developing communities. Any description of all the hands-on work of the Africa Mercy in this article would take to many pages and never would say enough. You'd have to see it for yourself.

Their website [www.mercyships.org](http://www.mercyships.org) gives a reasonably good impression.



**ELWA Radio station**

#### **Preparing for Radio Operation.**

The next day, first thing in the morning, Dickson EL2DT joined our team and we left for the ELWA Compound. A one hour drive through Monrovia and along the coastline.

ELWA is not only a name, but also the callsign of an FM and shortwave broadcast station. ELWA also stands for Eternal Love Winning Africa. Broadcast listeners probably are familiar with this station. It was well known until 1990, before the start of the civil war in Liberia. They had radiobroadcasts directed towards all 4 corners of Africa and beyond, preaching the Gospel in 30 languages.

The station was destroyed during the war and they only had one 75W FM transmitter left, which broadcasted live about 8 hours per day. At the time we were in Liberia a new 5 kW shortwave transmitter was being installed and antennas were reconstructed. In 2008 the station will broadcast in English and several different Liberian dialects again.

After talking to the technical staff of ELWA we found a nice place for the antennas and for our shack. Of course, the area for the antennas was not quite a nice summer lawn. Yes, it was flat but at the same time covered with high grass and bushes. We were able to hire several workers to clean the place. Since about 80% of the people of Liberia are unemployed this was a win-win situation. Work for them and a nice flat area (size of a football-field) for us.



**Top view ELWA compound**

The same day we went to downtown Monrovia to meet Ashley EL2AR and Bassam EL2BN for an eyeball QSO. Ashley is the president of the LRAA (Liberia Radio Amateur Association) and Bassam is the secretary.

We had been in contact with them from the start of the operation. Bassam and Ashley arranged our license at the Ministry of Post and Telecommunications and handed it officially over to us. 5L2MS became a fact.

#### **Building the station.**

The next morning, Friday 5 October, we collected all equipment we had transported in a sea container 3 months ago. The stuff was locked away in a warehouse somewhere on the Monrovia Docks.



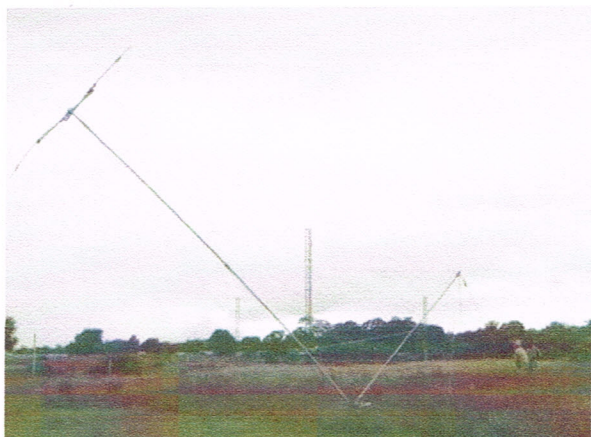
When we opened the warehouse all our stuff was scattered all over the place, but it was all there and in good shape. After loading everything onto a truck we headed for ELWA.



EL2AR president of LRAA and PA8AD

The first antenna we put up was a 3 element 20-15-10 tribander at about 40 feet high. The tower was a design of Arie PA3AN and consisted of two stacked 20 ft steel scaffolding pipes. It could simply be erected with another 20 ft pipe as leverage. We had already tried this out in the Netherlands and it worked again under the blazing sun of Liberia.

The tribander was connected to the tower by two pivoting pipes and could be rotated by walking around the tower pulling a rope that was connected to the reflector. Simple as that.



Erecting the 2el Tribander – the PA3AN way

At the same time the transceivers, linears, laptops and other auxiliary equipment was unpacked, and put together. Coax cable was cut, and plugs were soldered. The 40 meter quarter wave vertical was erected also and radials were spread out on the ground. Then we made our first QSO's on 20 meters to test the equipment.

That afternoon we drank about a gallon of water each to compensate the loss of body fluid (sweat). Although not an easy decision, we called it a day and went to the ELWA guesthouse for a Liberian dinner.

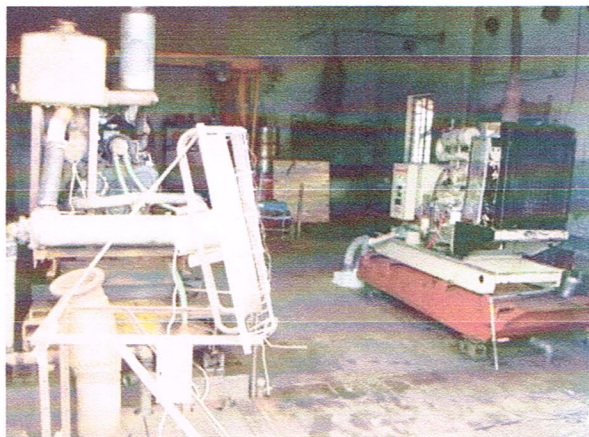
Saturday 6 October while the first morning pile-up was managed by one operator, the others erected the 30m-

17m-12m triband vertical and the 80m quarter wave vertical. The 80m vertical (over 20 meters in length) is a big antenna. It took some time to prepare, especially the guy wires, but once ready on the ground it was erected in a few minutes.

After that the guy wires were adjusted and ground anchors were checked. This became a daily routine for the other antennas too because of the tropical rain, wind and thunderstorms.

#### A temporary setback.

During the first day of operation we discovered a serious problem: S-9 noise from a generator nearby. ELWA has 3 electricity generators and all three generate a lot of HF noise.



Generators at ELWA

If the tribander was turned towards Europe and Siberia the noise level was at minimum but still S5 or higher, depending on the generator in use. Turning the beam to the West (directly over the generator building) made reception nearly impossible.

Clearing the airwaves at the source could not be done, so we found a way to work around this. We took a small shortwave transistor radio and walked around the compound until we found a place that we could actually hear something on that little radio.

That became the place for the two element 20-15-10 tribander, about 80m from the shack. So the second beam was set up. The Signal to Noise ratio increased a lot. Still not super, but we could turn the beam towards the Americas while actually hearing something. We decided to move the 40m vertical to a place near that spot also.

#### 160 meter antenna.

The 80m vertical could be base-tuned to 160m but we decided not to. Instead of that, plans were made to construct a 160m half wave inverted Vee dipole and use the VHF tower of ELWA as an antenna support. We talked to the guys from ELWA radio about this and they gave their permission to do so.

A few days later Ad PA8AD was hanging in the tower at about 120 ft above the ground while both Arie's (PA3AN and PA3A) assisted with the dipole wires and coax. The antenna was tested with an MFJ analyzer and



in one go we tuned the inverted Vee to 1825 kHz. During the expedition the dipole performed pretty well. We got reports like “booming signal” and “strong” on the DX cluster most of the time. Receiving with all the QRN present was a totally different thing though.

### **Propagation and operations.**

During our stay in Liberia: Sunspots... ZERO. Well, that was very promising, but not in the positive way. Another fine thing was this. Sometimes we were trapped by the D-layer at mid-day. It was like a curtain closing over the antennas. No signals could be heard or whatsoever. So why not try a higher frequency then? Now, the F-layer did not help us much either. Higher frequencies could not be used most of the time. But sometimes we were able to get out on 10m and 12m for a few hours, so we could put some stations in the log on those bands.



**PA3A and PA3WW operating**

Operating on 80m and 160m was extremely difficult. Lots of QRN made reception impossible most of the time. There was a limited window during a few hours around midnight. And, of course, QRN and static's mean thunderstorms. We had to get off the air several times because of lightning striking nearby. It usually meant stopping the operation for the rest of the evening. Talking about electrical things.

A countless number of times we were off the air because of a power down on the compound. There were certain times during the day that the power down was planned. There were many times however that it was not.

After a week or so, we were able to be back on the air within a minute thanks to a team effort. Power goes down - switch everything off - start our two own generators - unplug from mains - plug into generators - switch everything on - a five seconds warm up for the linears - QRZ?

As we promised in several articles and on our website, we took time to listen to the “far corners of the Earth” to give everyone a chance to work Liberia. For the guys from Australia and New Zealand this is a very difficult job. Via our website ([www.liberia2007.com](http://www.liberia2007.com)) we received daily reports from VK about our signal strength.

With these reports we were able to tune our operation schedule so that it would be possible for them to work us. And yes, they did break the “EU-zoo” and the “NA-wall”, and overcame the “Japanese terror” (these words are from the DX cluster). We were able to put some VK's and ZL's in the log. This was not always easy. At times their signals were strong enough, and when we were asking “only VK”, then lots of hams from all over the world except for VK, seemed to think that they were from Australia too. You know what I mean?

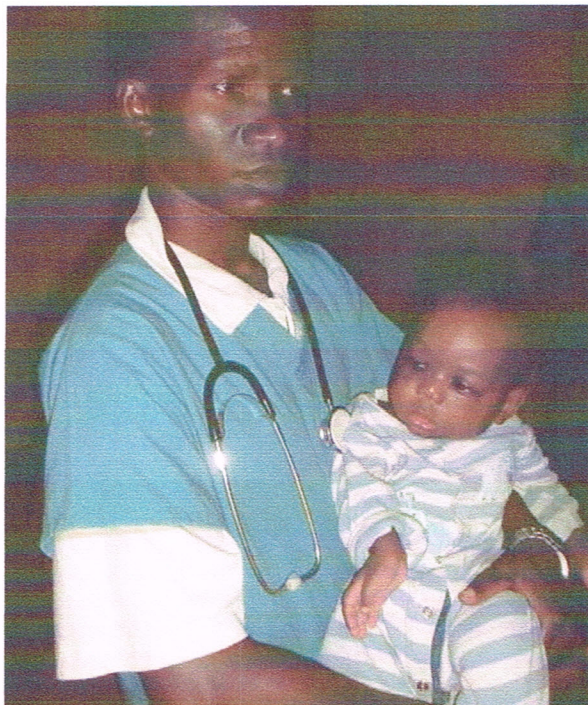
### **Bad Operators, Excellent operators.**

Boy, sometimes it was impossible to do any good to some of the radio amateurs. If we were working CW: “when are you coming on SSB” and if we were on 10m “when are you coming on 12”, “15 meters is open”, “please Asia”, “please ...”, “change operator”, etc. Okay, during the first two days or so we were not always performing at our best. But after that we did pretty well. The insults on the DX cluster stopped and we became “excellent operators”.

Thanks to Bassam EL2BN, we had access to internet and we could read everything people wrote about us on the DX cluster. If comments on our operation were valid, we changed our way of operating immediately. It was a steep learning curve and we did not mind.

Our website was of great help too. All messages posted in the guestbook were very positive. That really kept us going. Many hams posted a message asking for our band schedule and modes of operation.

Every day we were able to answer those questions via the News page on our website. Sometimes we gave straight answers on the DX cluster and announced for example our scheduled time on top band or RTTY-mode etc. I think that helped us and the guys at the other side of the pile-up a lot.



**Otis Young of the Gaye Town Clinic with a 3 years old child**



## Not just another DX-pedition.

We were not always QRV. Besides the radio operations we had other things to do, like witnessing the work of Mercy Ships and visit the Gaye Town Clinic.

So what is Liberia like? Let's do the statistics:

- Liberia: about 3.5 million inhabitants
- Percentage of people unemployed: 80% - 85%
- Healthcare: none or very little
- Number of dentists in Liberia: 2 (yes, two)
- A day of hard work: Salary US \$ 0,78

Shall we go on?

We witnessed this with our own eyes and ears. There are so many things to do in Liberia. People are surviving, and there is hope. Now that peace has come, people are on the streets, trying to buy and sell all kinds of goods to make a living.

Small shops selling old nuts and bolts, coconuts, petrol in bottles, pancakes, haircuts, plastic bottles, you name it. It's all there. Electricity is being restored bit by bit. Roads are being repaired. People are beginning to have faith that all will become good again. Yes, it will take many years but they will overcome the problems.



Shopping in the Gaye Town Area

The Gaye Town Clinic was founded by a local Baptist Church in Gaye Town to improve healthcare for all local residents and to start an AIDS prevention program.

In partnership with Mercy Ships the clinic was completed and staff (mostly people from the Church) were trained. The Liberia 2007 DX-pedition team supports this project. With the received donations and sponsoring we provide the clinic with means to continue the good work.

Any other of those statistics then?

- Number of QSO's made: 27.879 in total, 17.250 x CW, 8.919 x SSB, 1.710 x RTTY
- 4 operators from the Netherlands, 1 from Liberia
- 2 ham-transceivers in Liberia before we arrived
- 4 ham-transceivers in Liberia after we left

We repaired one old FT-80 transceiver and we donated a TS-50 to the Liberia Radio Amateur Association. So that makes four. Together with the transceiver, we donated all the dx-pedition antennas and 500 meter of coax cable to the LRAA, to start their new club station. We hope that the world will hear more of Liberian ham radio soon.

So what happened to the rest of the 275 cubic feet of material we transported in that sea container? Well, you already know about the ham-radio material.

All our other stuff (two 3 kVA generators, power cables, field beds, blankets, sheets, tool case, construction material, spares, etc, etc) was donated to the Gaye Town Clinic and to a new orphanage that was being built with help of Mercy Ships at the time we were in Liberia.

## So, mission accomplished?

Yes, we think so. We reached all our goals, It was, and is, a very rewarding experience for all of us. The team functioned very well. All preparations came together in those 3 weeks. During and after the expedition we have received many positive e-mail messages about the cause of this dx-expedition.

QSL manager is Henk PA3AWW. All claimed QSL-cards that were received by direct mail or via the QSL-request page of our website, were sent out before Christmas 2007.

If you wish to get in contact with the 5L2MS team about other matters than QSL, please send an e-mail to the author.

## Thanks.

We would like to thank our direct sponsors and donating hams for all the help we got and are still getting. You can be sure about it that the Gaye Town Clinic will use it in a good way. We sincerely hope that we can help Liberia with your gifts and see this country being rebuilt step by step.

Our special thanks go to Marie Keevern of Mercy Ships. Without her support, this DX-pedition would not have been possible. Never!

For the 5L2MS team, Arie Kleingeld, PA3A  
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Hope for the future