

Case Study – Rural Health in Malawi

The Safe Motherhood project

The need for good reliable communications to remote health centres in the rural areas of Malawi presented an exciting challenge requiring a VHF radio system solution. The UK Department for International Development (DFID) funded a pilot scheme for the Safe Motherhood Project, to provide radio-communication systems in three districts in the southern region of the country.

The locally based Team Simoco distributor Pitronic Limited Malawi, entered into an agreement with the Zimbabwe distributor, Vista Communications, to submit a bid for the tender prepared by consulting engineers Scott Wilson. The invaluable 33 years of expertise coupled with local knowledge and base of operations provided by Pitronic Limited, together with the knowledge and experience of Vista, who had previously contracted a similar system in Zimbabwe during the 90's in conjunction with Graham Conibear for Scott Wilson, ensured the joint venture success.

The scheme called for a turnkey solution to survey, supply, install, commission and maintain three VHF radio networks set to link groups of rural health centres with district hospitals, for the primary purpose of minimizing response time, both in providing professional help and, if necessary, in dispatching an ambulance to transport an expectant mother to hospital. Most rural clinics are solely dependent on good radio communications, as this is frequently the only medium available outside of the major urban developments. By African standards, Malawi is not large, at 118,486 square kilometres it is smaller than England. It is dominated by Lake Malawi, which covers one third of the entire country.



However, distances from rural hospitals to the more remote health centres can be up to 80 kilometres or more, on dirt roads often impassable in the rainy season. The use of radio communications therefore, is literally a vital lifesaving tool.

The population of Malawi is around 10 million, making it one of the most densely populated nations on the continent.

The Malawi Government Ministry of Health and Population extends the public health service through a number of rural clinics and health centres. Team simoco radios comprising PRF10 repeaters and SRM9000 transceivers were supplied throughout three of the districts. The majority of the health centres had no electricity supply, and each was therefore equipped with a solar power system as an integral part of the installation. The advanced features offered by the SRM9000 enabled sophisticated facilities such as Selective Calling, ANI, Missed calls, Phone Book, Ring Tones etcetera, to be programmed for easy operation by unskilled staff working under difficult and isolated circumstances.

Careful planning using information gained from an initial survey, determined the optimum positioning of the three PRF10 repeaters to ensure the best coverage over the extensive areas of operation, with topography being both relatively flat areas and very hilly areas.



The combined resources of Pitronic Limited and Vista Communications has proven to be extremely successful in progressing the project through all phases from initial survey, which demanded some extensive travel, to final commissioning and acceptance. With rough bush tracks providing the only access to many of the remote centres the installation teams were of necessity equipped with 4x4 vehicles fitted with VHF radios and GPS.

Historically many district hospitals and health centres throughout the country had an assortment of simplex radio systems provided over the years, on an ad hoc basis from a wide variety of donor funds. The DFID funded Safe Motherhood Project, adopted the consultants recommendation of and integrated and consolidated approach to each network and the needs of each district. Linked together and sharing resources afford the ability to communicate directly with each other. This has offered a significantly improved network performance.

Under the guidance of Dr Esther Ratsma, the technical advisor of the Safe Motherhood project, the DFID have been active in Malawi for a number of years implementing this worthy project, which aims at improvement in pre-natal health care and conditions. She says, "Communication is critical when dealing with health issues, when a life and death situation occurs the need to call for more professional guidance is paramount and often the life saving force."

The Team simoco VHF radio equipment installed in the three districts initially selected for development is operating very successfully. Good received signal levels are being achieved throughout each of the districts. A few ambulances have also been fitted with SRM9000 mobile radios, the area coverage of which is being evaluated. Improvements have been realised and the network expanded.

Following the success of the pilot scheme the entire team look forward to the extension of the project to other areas selected for development under the next phase of the DFID funded programme.

