

CREEPER: The First Indigenously Developed Hand-held Digital Mobile Radio (DMR) in Sri Lanka

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Communication plays a crucial role in the context of military operations. The Revolution of Hand-Held radio from Analogue to Digital Technology reached up to many advanced radios with the application of Modern Technology. A famous means of communication which is utilized in modern military warfare is Digital Mobile Radio (DMR). However, due to highly expensive DMRs, it cannot be easily catered to suit various requirements. This paper aims to discuss the first Hand-Held DMR designed and developed for the Sri Lanka Military named the Creeper (The unique bird who can sing vast frequency bands). Creeper aims to reduce the capital cost investment on expensive DMR and provide flexibility for future improvements. The Creeper DMR is checked against existing DMRs such as Racal Cougar, tested on the field, and many improvements were made. A Voice Coder (Vocoder) is used to meet the VHF frequency bands designed and then further developed to work on both VHF and UHF bands. The test results were satisfactory in the field and it is currently being used by Tri-services in Sri Lanka. Creeper has successfully provided a cost-effective solution and would stand out as possible future foreign market.

Keywords: *creeper, digital mobile radio, military communication, UHF, VHF*