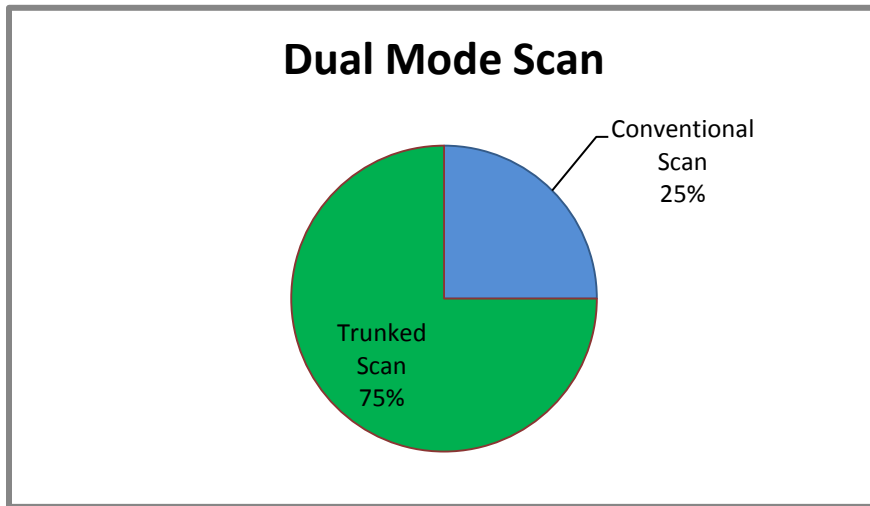




Dual Mode Scan Overview

RELM KNG Series Trunked radios provide the ability to simultaneously scan conventional and trunked radio systems. KNG radios support one dual mode scan list with up to 16 channels. Even though KNG radios support up to 16 trunked systems, all trunked channels in the dual mode scan list must be from a single trunked radio system.

When operating in Dual Mode Scan (DMS), approximately 25% of the scan time is devoted to conventional channels and 75% of the scan time is allocated to trunking channels.



This distribution is necessary to allow the radio to maintain operation with the trunking system. This allows the radio to scan trunked radio traffic, to maintain adjacent site information, to measure RSSI on adjacent sites in support of roaming operation and other trunked radio functions. In order to minimize the probability of missing talk group traffic on the trunked system, KNG radios conduct conventional scan operations in 375 mS blocks. On completion of conventional scan operations, the KNG radio will then revert back to the trunking control channel and will remain on the control channel until a specific number or type of system messages are received.

RELM's KNG series radios are capable of scanning up to 6 conventional channels in the 375 mS conventional scan window. Conventional channels can be either analog or digital. KNG radios qualify each channel for correct PL/DPL or digital Network Access Code during DMS. Best performance is obtained when the number of conventional channels is limited to 6. If more than 6 conventional channels are in the DMS list, the radio will use the first 375 mS conventional scan window for the first 6 conventional scan channels then switch to trunking scan. The next 6 conventional channels in the list will be scanned in the second 375 mS conventional scan window. This scenario continues until all conventional channels have been scanned.

DMS supports programmable scan hold times from 0 to 7.5 seconds in 0.5 second steps. This is the time the radio will remain on the active scan channel before resuming scan. It is important to note that for trunked talk groups, the scan hold time programmed in the radio does not start until any system hang time has expired. Thus, the trunked scan hold time will appear as the sum of the system hang time and the radio's programmed scan hold time.

DMS allows programmable scan talkback type. This can be set to either selected channel transmit or active channel transmit. This is the channel the radio will make transmissions on while the scan hold time is active.

