

CHANNEL SCANNING METHOD

When the base unit is power up and after initialisation, the Tx channel no. is decided by the RAM content. If the RAM content holds a value over 25, the unit will preset to channel 25 for communication. The Rx channel will be scan from CH1 to CH25 by one channel step and then repeat.

When handset is power up, the channel assignment is used the same method as those of Base Unit, its Tx and Rx channel stays at the current channel and will not scan. When handset request to talk, it will scan the Rx channel and then try to communicate at current channel first. If the communication is not successful, it will try another two clear channels. If the communication still fails, an error tone of three beeps will be generated.

If for some reasons the unit losses communication, place the Handset to the cradle for a while, the Base Unit will initiate a new security code with a channel no. to the Handset Unit.

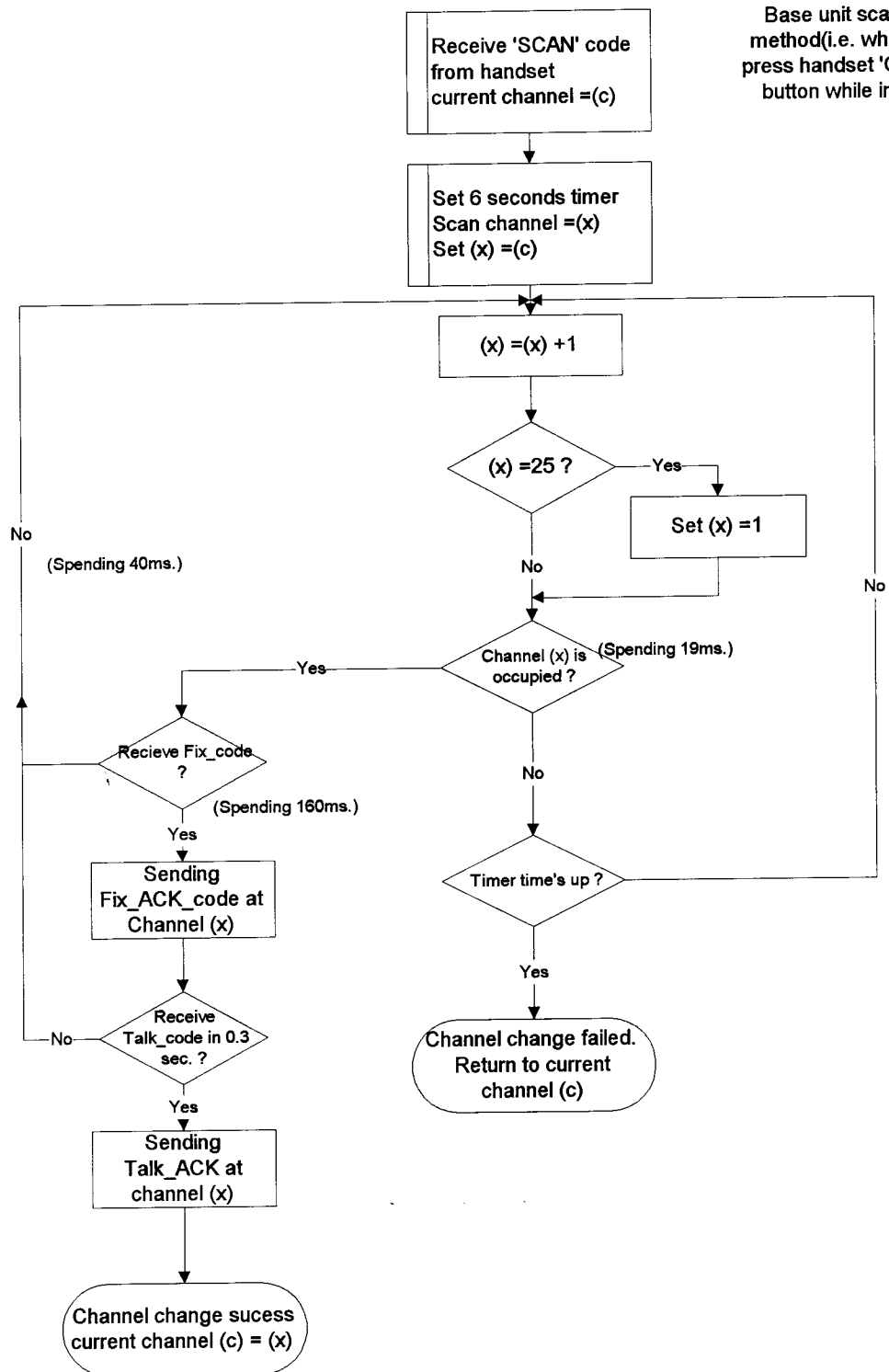
For manual channel change, Handset will send a channel change command to the Base Unit, and then start scanning the next free channel. After receiving the channel change command, the base unit will be scan from CH1 to CH25 and then repeat. If a free channel is found, the handset will stay at the channel and initiate request talk on command and the base will acknowledge the command and stay at the free channel. The channel change process is completed. If they can not communicate at the 1st free channel, the handset will start scanning another free channel and initiate request talk on command again. If they can not communicate at the 3rd free channel, the unit will go back to current channel and an error tone of three beeps will be generated from handset to indicate the channel change process is failure.

THE TEST CONDITION OF CHANNEL SCANNING

Two signal generators which connected with passive antenna is used to act as another cordless phone that it transmits one pair of the transmission frequency (43.72Mhz, 48.76Mhz). The field strength of these signals set to 5000 microvolt/meter at 3 meters away from the cordless phone and the modulation of these signals is +/- 2.5Khz deviation with 1 Khz tone. The channel scanning operation is under tested.

TESTING PROCEDURE AND RESULT

Once the testing set-up has already prepared, the 25CH cordless phone under test (EUT) is powered on. EUT is switched to 'TALK ON', therefore RF link is established. The 'CH' key is pressed to make a channel scanning operation. The communication frequency of EUT is measured and the receiver output is also monitored to identify existence of the 1Khz tone. The 'CH' key is pressed again and repeat the measuring. After channel scanning operation process more than 30 times, the output signals of the signal generators are changed to another channel frequency, and it will do the channel scanning 30 times again. Finally, it will finish the whole testing after CH1 to CH15 are tested. The result shown that the EUT is never establish a communication channel at the signal generators output frequency and the receiver of the handset keep silence on whole test.



Send 'SCAN' code at current channel (c)
 Set trial count (t) =1
 Scan channel =(x)
 Set (x) =(c)

Handset scanning
 method(i.e. when user
 press 'Channel' button
 while in-use)

