If your like most people, buying your first CB radio can be a challenge. There's a lot of techno speak that surfaces in the specifications list when comparing the features of each radio. It can often feel as alien to the uninitiated as an astrophysics journal is to a Farm hand.  
Here is a short list of Tech features with explanations of what they actually mean and more importantly how they effect the way you can use the radio.  
  
The Basics:  
  
UHF CB Radio:  
UHF stands for Ultra High Frequency. There are in fact 2 choices that citizens in Australia can use freely. 27Mhz and 477Mhz: The 27Mhz Band (often referred to as AM - Amplitude Modulation.) carries your voice in much the same way as your AM radio in your car transmits your favourite talk back host on the ABC. Just like your AM radio it has good distance coverage but the voice quality is not very clear when the signal weakens and it is susceptible to many types of interference (trams, Trains and power lines are a good example).   
Enter UHF CB Radios,  
Remember when you first heard FM Radio? Well Guess what. UHF CB Radio's Use FM as its method of caring your voice. Unlike AM the voice is encoded into the carrier waves frequency. Noise by its very nature only interferes with a carrier waves Amplitude Not its frequency and thus FM is clearer in many situations were AM struggles.  
  
80 Channel "Narrow band"  
A few years back, UHF CB radios had only 40 Channels. Channels are just like the channels on your car radio (they each use different frequencies) What the authorities decided to do was to make the spacing between each channels and the stations them selves narrower in terms of the space they take up. This resulted in a doubling of the channels that can fit withing the same frequency range. So you might ask, why do you need so many channels?. Answer, whilst You only need one channel at any given time you don't want to be talking over every one else in your vicinity on that same channel. You need to find your self a channel were you can talk with other uses alone. Having 80 channels rather than 40 makes that a whole lot easier.  
  
Watts  
This is a simple measurement of a CB Radios Power output. More is Better right? Well kind of provided that all other factors are equal. Watts are just one facet in determining a CB radio's distance capability. A very much forgotten factor is the radio receiver sensitivity. If you think about it, what's the point in having great transmission distance if your receiver is deaf and can not hear the other radio at that same distance. There is also a down side to hand held radio's with big power in that they can use more battery power and so if your only wanting to go short distances it is an advantage if the high powered hand held set can reduce its power to save battery life or make sure that your High powered radio has a decent battery to match.  
  
Duplex or Repeater Function.  
Duplex allows a CB radio to automatically transmit on one channel and receive on another. This is used when operating through a repeater station. Repeaters are normally located in high places like mountain tops or on top of tall buildings. From this high ground repeaters can reach great distances. Lets say your on one side of a mountain and your friend is on the other side. Unless you have a truck load of illegal power at your disposal your unlikely to reach each other as UHF radio frequencies don't really go over and around things like mountains all that well. However, if the mountain has a repeater on top you and your buddy can both generally reach it as it will most likely be in line of sight to both of you. The repeater does exactly its name sake. it repeats the transmission on the receive frequency. If a repeater is available the distances that can be covered around that repeater is very large.  
  
Squelch.  
The easiest way to think of squelch is to think of it as a speaker muting system.  
Unless you like listening to background static (The noise left over from the big bang) or interference from spurious emissions around you then you will need to adjust your squelch. All radios have a basic squelch control. The most basic squelch function allows you to set a threshold signal level where below the set threshold the speaker is muted so when no one is transmitting you hear nothing. Some radio's have enhanced squelch systems that allow you to eliminate transmissions from people your not wanting to talk to. Its like having a private line (Sort of)  
  
CTCSS   
Continuous Tone-Coded Squelch System or "Tone squelch"  
CTCSS is a squelch system (Speaker muting system) that goes one step further than just setting a background noise level threshold. The CTCSS system works by transmitting a continuous (sub-audible) tone with your voice transmission. The receiver ( or group of receivers) when activated with CTCSS and with the corresponding tone set the same remains muted unless it hears that specific tone. Every one else on the same channel can hear your transmissions but you and your partner transmitters/receivers using the system will only hear each other. In order for this system to work all radios in the group must switch the system on and set them to the same tone number. To the users in the group it appears that you and your partnered transceivers are the only ones on the channel were in fact there may be others but you just on't hear them.  
  
DCS  
Digital-Coded Squelch may also be called CDCSS (Continuous Digital-coded Squelch System )  
Designed as the digital replacement for CTCSS it works in much the same way but instead of transmitting a sub-audable tone a digital code is transmitted to wake up the receiver at the other end.  
  
The above (CTCSS and DCS) systems are handy when you do not want to be interrupted or alerted buy other users  on the same frequency/channel. Imagine you were using UHF CB radio's in a timber yard between your office staff and the workers out in the yard. With this system on your not going to hear anyone else accept the people using the special tone or code.  
  
CTCSS From an outsiders perspective.   
You might try and talk with someone at random on a given channel and they seem as if they are ignoring you. (they are probably not ignoring you, they may have CTCSS or DCS switched on and can not hear you)  
IMPORTANT: if you have your DCS or CTCSS on you will not receive any transmissions from any CB radio unless they have the same function switched on and are using the same tone or code.   
  
Roger BEEP,  
Remember watching those old war movie's. Do you recall the radio operators saying "OVER" at the end of each transmission? They did that because these types of radios cannot transmit and receive at the same time so as a way of letting the others know when its there turn to talk you let them know that you have finished your transmission. The Roger beep is an automated way of doing the same.  
  
VOX   
Voice Operated Transition. if your using a head set and your Radio has VOX. you can transmit without pressing a button. the simple act of talking triggers the transmit function of the radio.  
 Handy if your skiing down mountains with both hands busy.