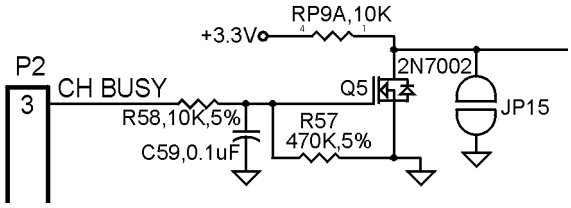
Channel Busy

The Channel busy line is interfaced to the host radio at a point that changes state when the radio receiver is actively receiving carrier. The point can be active when high or active when low. This enables the C Plus to monitor the condition of the receiver and use that information to more accurately make decisions. Specifically, the Channel Busy line is used: a) To hold off transmissions until the channel is free; b) To remute the receiver when in COS qualified mute mode; c) In the implementation of the Authorize feature and for proper functioning of the Ambush feature.

Activating the Channel Busy input
If Channel Busy input is allowed to always be active, the line could periodically float high or low, affecting how the C Plus works. Because of this, when not in use, jumper JP-15 should be inserted. This forces the signal to a known stable state, effectively deactivating the circuit. If a feature is to be implemented that requires Channel Busy, jumper JP-15 must be removed. See the schematic below:



Interfacing to a Host Radio:
All radios have a point that changes state with detected carrier. Probably the easiest place to find the signal is at the squelch gate or the mute line of the audio amplifier. The signal changes state whenever carrier is detected. Some radios have accessory connectors with programmable outputs. In these radios, you would be looking for PL/DPL/CSQ. The best of those would be CSQ (Carrier Squelch). If you are unsure of the active state, scope the point and then inject an on-frequency signal into the radio. When it detects the carrier, the point will change state.

Programming Channel Busy:
The channel busy sense is programmable to be busy (active) when high or busy when low. This selection is available in the C Plus personality programming under *Define Radio Interface*. If you desire to have the Channel busy input ignored, the sense should be programmed for “Active Low” and JP-15 should be inserted.

See Also:
COS Qualified Mute

Encode Capability

Jumpers