

3.1.1 Remote Site 10W BDA Description

The remote site 10W **Bi-Directional Amplifier** receives downlink signals from the Fibre Optic shelf at port **A** and passes them through a bandpass filter tuned to the downlink passband (408-411MHz). From there the signal is amplified by a **Low Noise Amplifier** (+31dB) and a 0-15dB switched attenuator to a 10Watt power amplifier (22dB). A final bandpass filter completes the downlink path to the off-air antenna (port **C**).

The uplink path starts at the off-air antenna (port **C**) and is passed first through a bandpass filter tuned to the uplink band (417-420MHz). A 20dB amplifier and switched attenuator amplify the signal by 20dB and the signal then passes through a final bandpass filter to the AGC attenuator. After the attenuator the signal is amplified to one Watt power to the AGC logarithmic detector giving this path a dynamic range of approximately 30dB. After the AGC detector the signal exits the shelf to the FO shelf at port **B**.