

AFL NEO60-05590SERIES UHF FREQUENCY EXTENDERS

OVERVIEW/SYSTEM DESCRIPTION

The AFL Off air Amplifiers for the Pasadena Blue line project are 2 way on-band RF amplifiers. Their application is as an interface between the donor radio sites and the Fibre optic receivers and transmitters which will extend coverage to the locations via the fibre optic link. There are three units - two designated for the 'UHF1 / UHF1A' frequencies the another one for the 'UHF2' frequencies.

The 60-05590Series (UHF1A) provides an extension to the existing CCE-470N3 (UHF1) and CCE-480N4 (UHF2) amplifiers. It is designed to be connected to the RF ports of these units as shown in the system diagram.

Each unit is housed in an environmentally protected IP65 steel wall-mount case. Handles are provided for carrying the unit and the door is fitted with locks. The unit interfaces with 'N' type female connectors for RF connections and heavy duty connectors for routing of AC power supply input and alarm output wiring.

To provide adequate selectivity in the Downlink and Uplink paths, combline design bandpass quadplexers and duplexers are used at the air interface ports. In addition each channel to be passed is selected by a 15kHz or 25KHz Channel module which provides a high level of rejection at adjacent channels. To provide the required gain to reach the required signal levels, low-noise amplifiers (LNA's) are used in each path, these being followed by power amplifier modules in the uplink to provide the required intermodulation performance. Gain adjustment is available locally using switched attenuators.

Note that "Downlink" refers to the RF path from the base station (donor site) to the UHF2 transmitter and that "Uplink" refers to the RF path from the UHF2 receiver to the remote base station.