

OVERVIEW/SYSTEM DESCRIPTION

The AFL Band Selective Cell Enhancer is a 2-way on-band repeater. Various models are available to cover frequency bands from 50MHz to 3000MHz with power levels up to 100Watts. Its main sphere of applications is in urban areas where the topology is such that shadows occur in the propagation pattern (for example within large buildings, conference centres and tunnels, etc.)

The Band Selective Cell Enhancer is a 2-port device for direct connection to two antennas, usually a highly directional Yagi or similar aligned towards the base (donor) site and an omnidirectional or leaky feeder antenna to cover the mobiles. The frequency bands that are passed by the Cell Enhancer are set as per the specific customer requirements.

AFL manufacture a wide range of Cell Enhancers, configured for each customer's specific requirements. Two basic physical variants are available, a rack mounted version to fit in a standard 19" rack and an environmentally sealed wall mounted version which requires no further enclosure.

This system consists of a bi-directional band selective, cell enhancer operating in the 390MHz band. It is housed in a wall-mounted environmentally protected (IP65) case powered from an externally supplied 24Volt DC source. Alarms are provided for each amplifier as a summary, volt-free relay contact pair for easy integration into an existing alarm system. A supply isolator switch is fitted inside the unit and there are D.C. and Alarm on indicators on the outside of the door.

An automatic gain control system is employed in the uplink path in an attempt to negate the overloading effect from mobiles operated close the antenna.