

INTRODUCTION TO EMR CORPORATION COMMUNICATION ENHANCEMENT SYSTEMS

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As SMR (trunking) systems gained popularity in the 1980's and high performance portable radio transceiver units for these systems became available, an upsurge of portable usage took place. It was quickly found that portable coverage into and out of buildings, tunnels and areas deeply shaded from the base station site suffered from intermittent to a complete lack of coverage.

The idea of enhancement coverage using uni-directional or bi-directional filter-amplifiers provided an answer to the problem. Placing an antenna array in the clear, aimed at the remote site provides access to the communications system. Either "lossy" line or hard line with properly located antennas throughout the areas to be covered, provides distribution of the desired signal.

EMR Corporation began work in this very specialized area in 1985 with enhancement systems located in city and county jail facilities. Soon, tunnels, state and federal correctional facilities, airports, gambling casinos and semiconductor fabrication plants were equipped with enhancement systems. Many cities throughout the world require, as part of their building code, enhancement systems for public safety communications within large or underground structures. Shopping malls, convention centers and multi-story office buildings have been enhanced to provide communications for police, fire and emergency medical aid, as well as routine administrative operations. Extending communications into such areas for safety and site security is fast becoming the rule, rather than the exception.

EMR engineers found that suitable amplifiers for optimum enhancement system performance could not be found on the market. After an analysis of system requirements, we have designed special amplifiers to meet this need.

Using our experience in broad band filter design, we developed very effective filtering components. We now have a complete, mature line of enhancement system products. These include multi-band and cross band systems that will handle midband, FM broadcast, VHF, UHF, cellular, 800 and 900 MHz SMR, PCS and VHF, UHF and 900 MHz paging operations. Our enhancement systems perform equally well for digital or analog radio communications system applications.

Over the years we have built solid experience in a wide variety of signal enhancement systems in the spectrum from 66 MHz to 960 MHz. To support these systems we maintain stocks of all active amplifiers and power supplies for immediate replacement. We warranty our enhancement systems for 5 full years from date of shipment.

EMR Corporation can design a system for you or provide assistance in the development of a plan for a suitable enhancement system design. Your needs can be met with an EMR Corporation signal enhancement system.

No enhancement project is too large or too small for EMR, please contact our engineers. We know you will be impressed with our approach, knowledge and suggestions.