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**ELECTRICAL ENGINEERING
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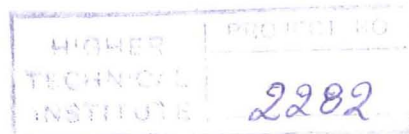
DIPLOMA PROJECT

**DEVELOPMENT OF A
BASEBAND SPREAD SPECTRUM
TRANCEIVER**

E/899

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ABSTRACT

The use of radio telecommunications has grown enormously the last few decades. As a result of this growth is that portions of the radio spectrum are very crowded with users, and there is a continuity need for more efficient ways of sharing the radio spectrum. The conventional way of allocating the spectrum is by frequency division.

Spread Spectrum Techniques, which are based on principles antithetic to those currently used in spectrum allocation for reducing necessary Bandwidth, offer benefits for spectrum sharing, for some applications, superior to those of frequency division. The spread spectrum principle is an advanced modulation technique which allows the transmission of information below the noise threshold of a non-hostile environment in such a manner that it may be subsequently demodulated to correctly retrieve the original data. This system will both impart and experience negligible interference to, or from, existing frequency spectrum users, even if they have the same frequency allocations. This report describes the baseband section of a Direct Sequence Spread Spectrum Transceiver.

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