

THE ZONE PLATE ANTENNA

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ABSTRACT

The report is divided into several sections to introduce the features, design and advantages of the zone plate antenna. The acknowledgement, declaration, content, list of illustrations, list of photographic plates, body of the report, conclusion, reference and the appendix is included in this report.

The acknowledgement, declaration, abstract and contents page is the 1st section for this report. Then we will show our project diagram, results obtained from simulation and some charts to introduce how the antenna operate in the illustrations section.

In the main body part, we will define and explain the whole operation of the antenna and the software simulation of the antenna, the most important part of the report is the Fresnel zone plate, which we will provide all the technical explanations and details of calculations on how we obtained the zone plate. We will also be explaining the function of the Low Noise Blockdown Converter and the Data Acquisition Interface. Software simulation using Advance Design System 2003 is also a major part of our project. We will be explaining in detail how we run the simulation supported by results obtained from the simulations.

Finally, we also will provide the simulation results using ADS 2003, practical results using LABVOLT system and the data sheet in the appendix.