

SPACE COMMUNICATIONS AND NAVIGATION SYMPOSIUM (B2)  
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## NEW DESIGN OF AN ANTENNA COUPLER

**Abstract**

The purpose of this paper is new design of an antenna coupler. coupler function is matching antenna load to transmitter and receiver for maximizing power transfer to antenna. In fact in this paper the antenna coupler system block diagram with explanations of each block is given. Then the hardware requirement is described for each section along with the challenges and technical requirements. Also the software Flow chart is presented. Finally antenna coupler prototypes that made by different companies are investigated. The results showed that using digital design decrease and weight tuning time are important and can be improved digital radio's performance also increase reliability