

DEDICATION

I DEDICATE THIS WORK TO:

Soul of my father Abd Alsalam and to my mother Rogia Who introduce me to the joy of reading from birth, enabling much study to take place today.

To all those who directed me to the way studying and rat me on the right study tract.

To those who told me about this experience and experiments.

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ABSTRACT

This research reports on the control of the antenna by computer two dimensions through various angles.

A small stepper motor rotates the antenna. The objective of this project was to design the necessary circuitry and software to drive the small stepper motor via a computer's parallel port interface.

There are three key components to the project design: (1) mechanical drive, (2) hardware to software interface, (3) computer software to drive the stepper motor via a computer.

The three components were successfully integrated to rotate of the stepper motor through forty-five degree increments.

تجريد

هدفت الدراسة لمعرفة مدى فعالية نظام تحكم في الهوائي عبر الكمبيوتر على اتجاهين الذي قامت الباحثة بتصميمه والذي تم توصيله بجهاز حاسوب مبرمج بلغة C++، وذلك للتحكم في الهوائي الموصول بدائرة حيث يتكون هذا البحث من ثلاث مكونات أساسية هي

1. تصميم جهاز الهوائي
2. عمل دائرة المواءمة بين جهاز الحاسوب وال (Stepper motor)
3. كتابة البرنامج بلغة ال C++، وذلك ليقوم بعملية التحكم .

تقوم هذه المكونة مجتمعة بعملية التحكم في الهوائي على اتجاهين رأسيا وأفقيا

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List of Abbreviations:-

| | |
|-------|--|
| I/O | Input /output |
| PID | Proportional-Integral-Derivative |
| RF | Radio frequency |
| LNB | Low-noise block |
| GCA | Ground control approach |
| IC | Integrated circuit |
| DB-25 | D-subminiature-25 |
| USB | Universal Serial Bus |
| IEEE | Institute of Electrical and Electronic Engineers |
| AWG | American wire gauge |
| TTL | Transistor – Transistor logic |
| IDE | Integrated Drive Electronics |
| BIOS | Basic Input Output System |
| MIMO | Multi-Input-Multi-Output |