

參賽隊伍人員及機器人簡介

Team Member and Robot Introduction

組別：遙控組 自動組 指導老師：吳堅本
學校名稱：中州科技大學 隊伍名：中州 B 隊
(School : Chug Chou University of Science and Technology)
(Team name : Chug Chou B Team)

壹、參賽隊伍人員：

一、指導老師



吳堅本 老師

- 專長領域：工業配線之應用於製程機器之設計與配線、工廠配電系統之設計與維修
- 經歷：中州科技大學電機與能源科技系專任講師 (2011/08~)
- 中州技術學院電機系專任講師 (1996/08~2011/07)
- 中州技術學院課務組長 (1999/02~2009/05)
- 達德商工電機科教師(1994/08~1996/07)
- 大葉大學電機系助教(1991/08~1992/07)
- 吳鳳工專電機科助教(1990/08~1991/07)
- 正新輪胎總廠電控保全人員 (1988/08~1990/07)
- 正德工商電機科教師(1985/02~1988/07)
- Areas of expertise: the Industrial Wiring applied process machinery design and wiring, factory design and maintenance of the distribution system
- The experience: Zhongzhou University of Science and Technology, Department of Electrical Energy Technology Lecturer (2011/08)
- Chou Institute of Technology Department of Electrical Engineering Lecturer (1996/08 to 2011/07)
- Chou Institute of Technology Curriculum Leader (1999/02 to

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2009/05)

- The Dade Commerce and Industry Motor teachers (1994/08 to 1996/07)
- Da-Yeh University, Department of Electrical Engineering assistant (1991/08 to 1992/07)
- The WuFeng Junior College Teaching Assistant, Electrical Branch (1990/08 to 1991/07)
- Is a new tire plant in electronically controlled security personnel (1988/08 to 1990/07)
- Of the Zhengde Industrial and Commercial Motor teachers (1985/02 to 1988/07)

二、組員



莊博堯

組長:

- **負責項目:** 擔任小組組長、機體機構製作、配線、機構功能測試、電路焊接、機器人測試、比賽中擔任操作者之一。
- **工作內容:** 機器人整體配線，焊接控制電路板，製作機器人行走。
- **得意之事:** 此次參與比賽收穫良多,把素材經過加工形成一台會走路的機器人這一路來的過程雖然艱辛,但是成功的那一刻卻無比的開心,從無到有一路以來遇到許多問題也克服許多問題,也讓我了解到肯動腦筋,就一定會有解決問題的方法。
- **Responsible for project:** as a team leader, the body institutions production, wiring, institutions function test circuit welding robot test match as operator.
- **Work:** robot overall wiring, welding control circuit board, making the walking robot.
- **Proud of things:** Involved in the game harvest the lot, the material processed Although arduous, but the success of the moment but very happy to form one robot walking this road to scratch all the way since encountered many problems to overcome manythe problem, I learned willing to use their brains, there will be problem-solving method.

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李建慶

組員：

- **負責項目：**材料採購、機體機構製作、機構功能測試、負責機構維修、電路焊接、機器人測試、比賽中擔任操作者之一。
- **工作內容：**購買機構所需材料鋁材、銅材、鐵材•馬達、螺絲、螺母、電子材料，機器人整體，製作機器人行走、升高機構。
- **得意之事：**第一次參加機器人製做，一開始一竅不通慢慢越來越會做合組員跟老師一起完成一台機器人會走會動，完成時候很感動也學習很多知識。
- **Responsible for the project:** the purchase of materials, the body institutions production, institutions function test, the agency responsible for the maintenance, circuit welding robot testing, the game served as one of the operator.
- **Work:** buy institutions required materials of aluminum, copper, iron wood motor, screws, nuts, electronic materials, the robot as a whole, making robots walking, lifting mechanism.
- **Proud of things:** The first time to participate in the robot system to do, beginning do know nothing about the slowly growing together team members to complete a robot will go will move along with the teacher, completed when it is moved also learn a lot of knowledge.



李沅達

組員：

- **負責項目：**材料採購、機體機構製作、機構功能測試、負責機構維修、電路焊接、機器人測試、比賽中擔任操作者之一。
- **工作內容：**購買機構所需材料鋁材、銅材、鐵材•馬達、螺絲、螺母、電子材料，機器人整體，製作機器人行走、升高機構。
- **得意之事：**在這次 TDK 盃全國大專院校創思設計與製作比賽中，我是負責機械材料與設計組裝，在這製作過程雖然很累很辛苦但也學習到不少的東西，但在這過程中最重要的就是遇到許多大大小小的問題，每次遇到不好解決的問題，指導老師會幫忙想辦法讓我們順利完成救災機器人
- **Responsible for the project:** the purchase of materials, the body

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institutions production, institutions function test, the agency responsible for the maintenance, circuit welding robot testing, the game served as one of the operator.

- **Work:** buy institutions required materials of aluminum, copper, iron wood motor, screws, nuts, electronic materials, the robot as a whole, making robots walking, lifting mechanism.
- **Proud of things:** The TDK Cup College Creativity design and production of the game, I was responsible for the machinery, materials and design assembly, although very tired very hard in this production process, but also learn many things, but the most important in this processis encountered in many large and small, each encounter bad solve the problem, the instructor will help to think of a way to get us to the successful completion of the Rescue Robot

貳、機器人簡介

一、構想與策略分析

構想:來自於 第 15 屆 TDK 比賽 類似機體

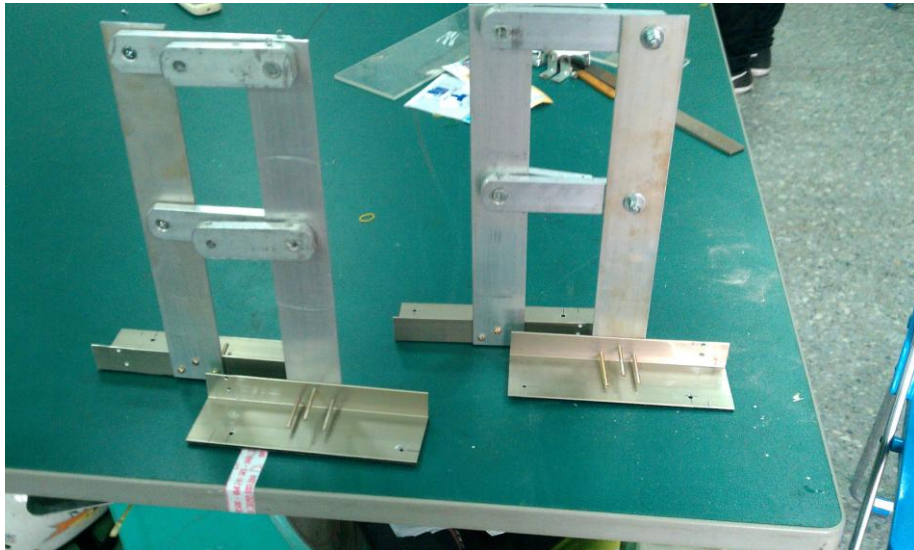


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二、策略分析：

1. 因為規定遙控組只能用行走，不能用圓形跟輪子帶動



二、機構設計

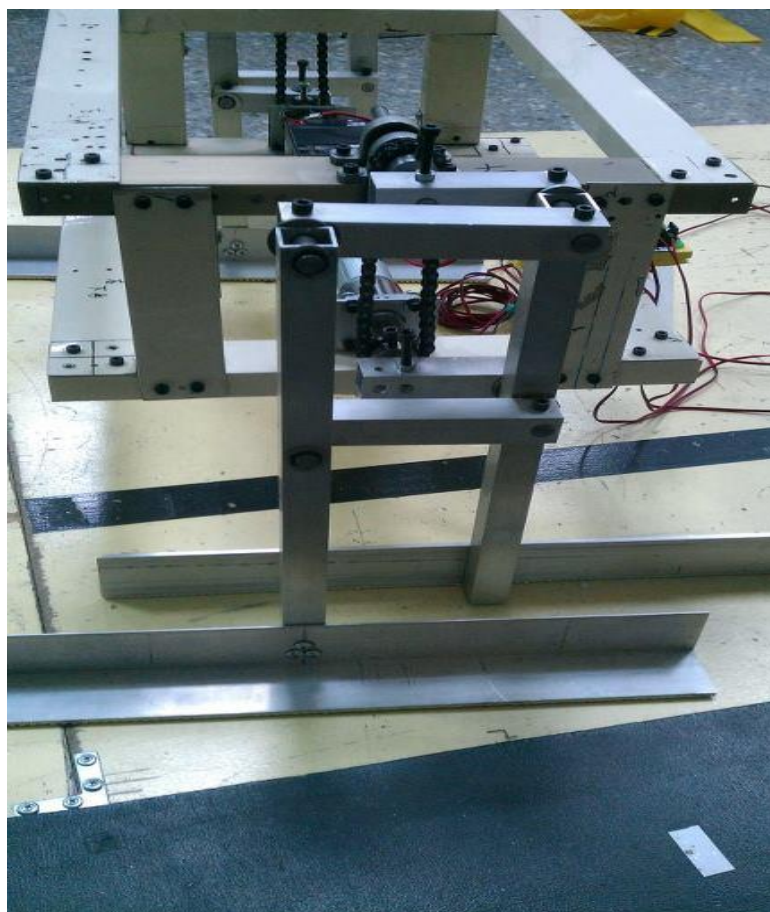
1. 用鏈條帶動齒輪, 行走
2. 用鋁條做為腳
- 3 培林，齒輪帶動鏈條

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三、輪子驅動設計



架構

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齒輪



鍊條

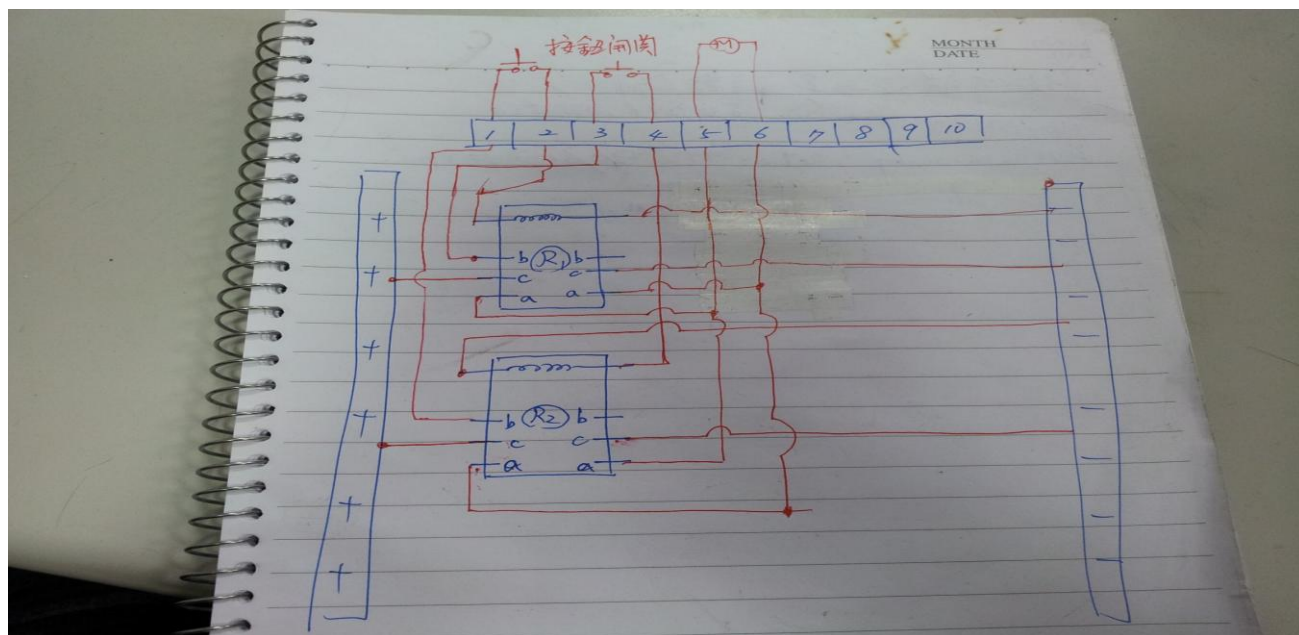
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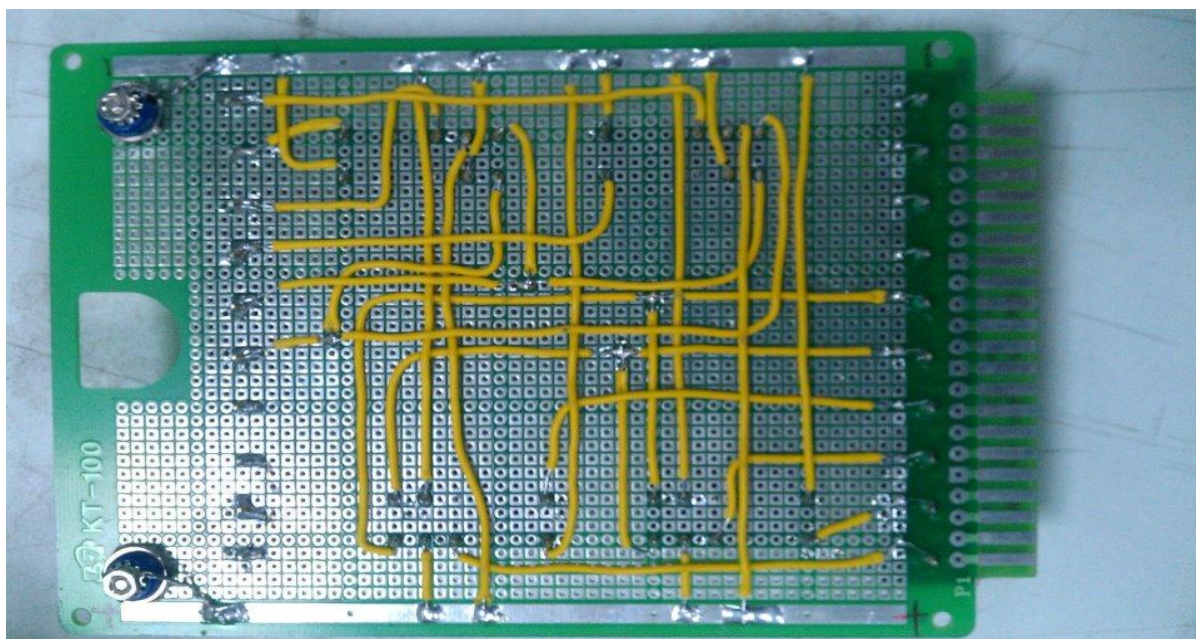
腳

四、電路設計



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馬達控制 線路圖

五、感測器設計(遙控組無免填)

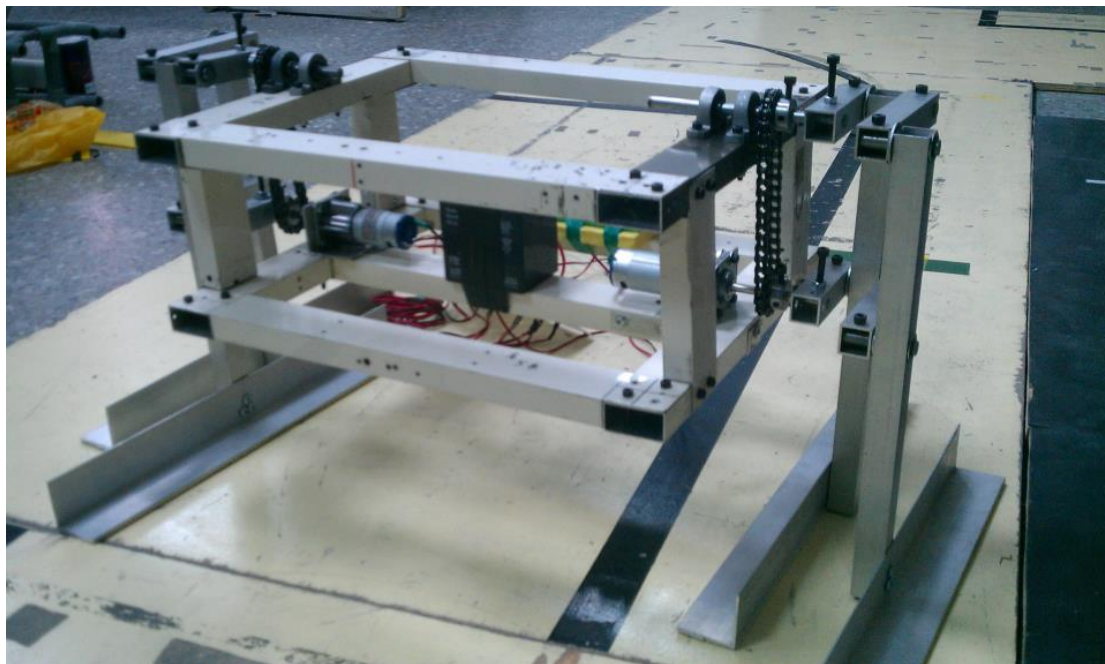
六、組裝、測試與修改



組裝

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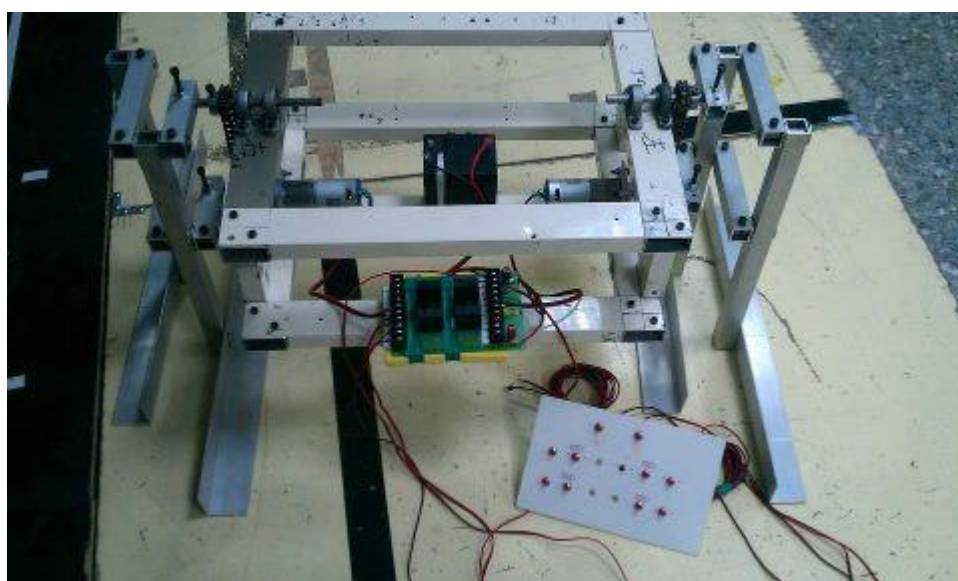


測試、免修改

七、機器人創意特色說明

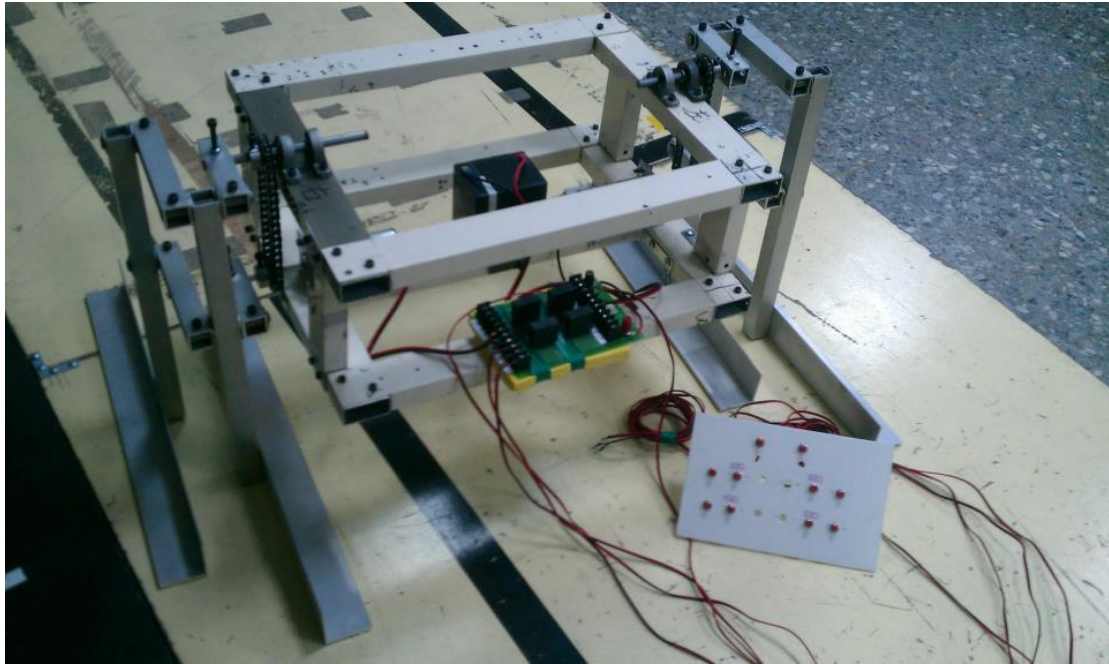
節能減碳環保機器人, 利用之前學長之前剩下能用材料, 在加上我們

的巧妙設計, 變成一台遙控機器人, GOOD!



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參、參賽心得

- 剛開始製作機器人時，真的是什麼都不懂，一切從"零"開始，從最初討論到選用材料，購買材料，就耗費相當大的功夫。沒有什麼基礎，材料該從何買起?找尋著所需的材料。學長的幫忙下找到了鋁材店，與老闆討論後買了我們所需鋁材，也拜託老闆指引我們其他所需的材料可購買到的地點。!!找齊了我們的材料，一步一步的製作。從不會不懂慢慢的了解。參加 TDK 學習到許多課堂上面學不到的知識。雖然這次比賽沒有進入決賽，不過說真的"過程.態度"我想比輸贏更是重要!!從零到完成所有的機構，這一段時間以來要感謝指導老師教導我們!，這段美好的日子會在大家的心中留下一個很棒很美好的回憶!!
- Just started making robots, really do not understand anything, all starting from zero, from the initial discussion to the selection of materials, purchase of materials, consume considerable effort. Even were the basis of the material where to buy from? Finding the required materials. Seniors help find aluminum shop, after discussion with the boss to buy what we need aluminum, and other required materials can be purchased to locations please boss guidelines. !! Leveling material production step by step. Do not know from not understanding slowly. Participate in the TDK learning to many knowledge can not be learned in the classroom above. Although the competition did not enter the final, but that really "process. Attitude" I think more important than winning or losing!! Complete all the institutions from zero to time since we would like to thank the instructor teaches this wonderful day left in the hearts of a great really good memories!