

1999/01 Ushabti Modell MM

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Abstract

Ushabti MM is an approach of building a platform for a mobile, autonomous robot. Platform means that the device offers the most important features like power supply, controlling circuits, basic sensors and so on. On top of this platform, any additional sensors can be attached and any kind of intelligent control software can be brought to execution. If one wants to experiment with neuronal networks or with fuzzy logic, he can base on the robot platform and its features.

1 Project characteristics

Project code	1999/01
Project name	Ushabti Modell MM
Started	19.08.99
Ended	not yet
	80537 for motor control; 2xDC/DC switching regulator 5V/2A; C164 for US sensors; Polaroid US sensors; Sharp IR sensors
Used tools, libraries and components	2 DC motors for drive, equipped with 2 hall sensors each; 80537 for motor control; 2xDC/DC switching regulator 5V/2A; C164 for US sensors; Polaroid US sensors; Sharp IR sensors
	Height: 0,8m; Diameter: 0,36m; Battery: 12V/40Ah;
Technical data	Weight: 40 kg; Height: 0,8m; Diameter: 0,36m; Battery: 12V/40Ah;
Used for other projects or applications	not used

2 Introduction

The ancient egyptians believed in a life after death. They thought that in the realm of the dead they would have to work, to sleep, to disseminate and to harvest like in our life on earth. So they put little figures made of ceramic into the graves. Those figures were called ushabtis. Covered with magic words they should work instead of the dead who then could enjoy their life after death. My approach is a little similar to the old egyptians approach. I would like to have a robot doing some work for me, too. After the robot is build, I will try to make him clean my room's floor - and my little brother's, too - if he behaves!

3 Wiring diagrams

This section features Ushabti's wiring. Since it makes use of the results of my other projects, some of the used circuits are not described in here and must be looked up in the corresponding project.

3.1 General wiring

*.pdf; *.gif; *.csv

Figure 1: General wiring diagram

A Related web pages

- [W1] **R2-D2 Builders Club**
www.robotbuilders.net/r2/main.htm

A web ring dedicated to the nuilding of R2-D2 droids. You will find interesting pictures and ideas there. They also link to other exciting robot pages.

B Related literature

- [B1] **Jens Altenburg, Uwe Altenburg:**
Mobile Roboter: Vom einfachen Experiment zur Kuenstlichen Intelligenz
Carl Hanser (1999), ISBN 3-446-21121-7

Detailed description of several home brewed autonomous mobile robots. Emphasis: electronics and microcontroller (ST-6 and ST-7 series). Development software for ST-6 and ST-7 included on CD-ROM. READ IT!

- [B2] **Joseph L. Jones, Anita M. Flynn:**
Mobile Roboter: Von der Idee zur Implementierung
Addison-Wesley (1996), ISBN 3-89319-855-5

Tips and tricks for hobbyists.

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