

CHAPTER 1

INTRODUCTION

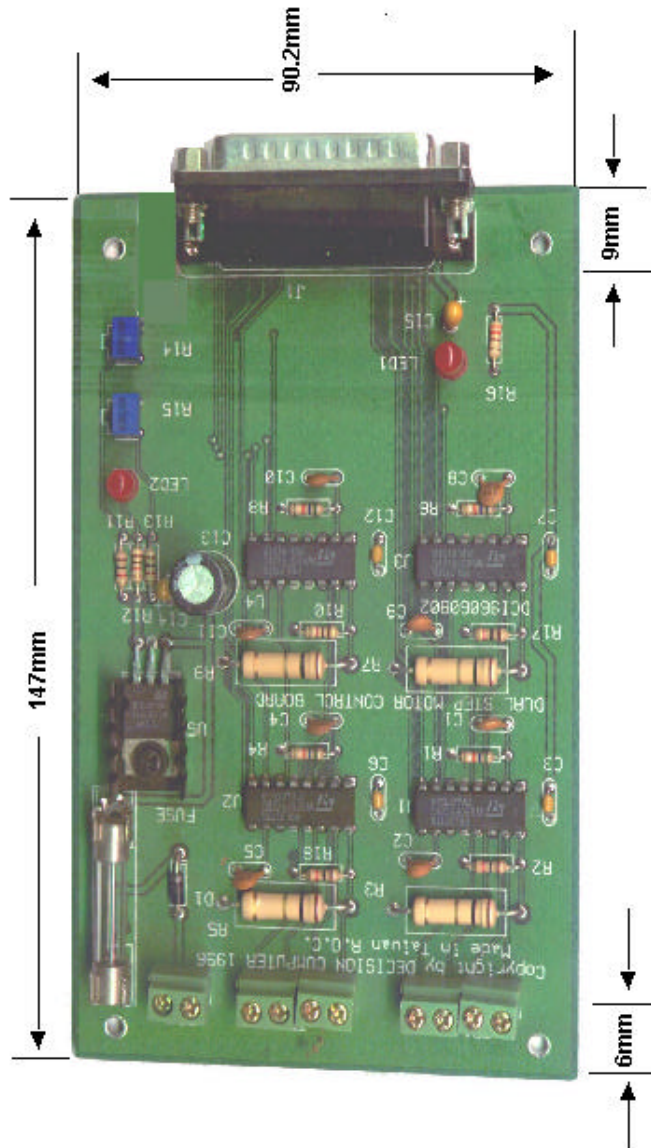
The dual stepping motor board is used to drive stepping motor, and provides two stepping motors control circuit. To drive the stepping motor, user can connect Pocket 16 DO box to dual stepping motor board, then connect stepping motor to it. The pocket 16 DO box is no need to occupy any slot of your PC system, it is suitable for any PC that contains a parallel printer port. Each stepping motor controller provides four output signals and receives six bits control string to drive stepping motor.

The features of the dual stepping motor board are:

- Support two stepping motor control circuit.
- Voltage range: 14 to 28V.
- Maximum current: 1 A.
- The stepping motor is driven by pocket 16 DO box which is connected to parallel print port.
- Support half step and full step revolution.
- Operating temperature 0 to 60 °C.
- Storage temperature -20 to 70 degree °C.
- Humidity 5% to 95% in non-condensing.

The package contains:

- Dual stepping motor board.
- User's manual.
- Pocket 16 DO box and manual (optional).

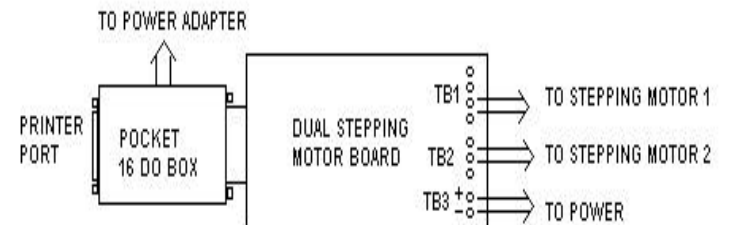


CHAPTER 2

HARDWARE INSTALLATION

Your dual stepping motor board is designed to be inserted to the pocket 16 DO box, please follow the steps listed below:

1. Turn off all power to your computer and all peripheral devices before installing your dual stepping motor board.
2. Connect pocket 16 DO box to printer port, then plug in power adapter to pocket 16 DO box.
3. Connect dual stepping motor board to pocket 16 DO box, then plug in power to stepping motor board.
4. Connect stepping motor to dual stepping motor board.
5. Turn on the computer and power adapter.



CHAPTER 3

HARDWARE CONFIGURATIONS

Before you use the dual stepping motor board, you must ensure that the power and signal are set correctly. The proper settings for the dual stepping motor board are described in the following:

3.1 TB1



The TB1 is used to connect the control signal of stepping motor, it will rotate clockwise if connect is correct, otherwise it will rotate counterclockwise or shaking. Please connect it correctly.

3.2 TB2



The TB1 is used to connect the control signal of stepping motor, it will rotate clockwise if connect is correct, otherwise it will rotate counterclockwise or shaking. Please connect it correctly.

3.3 TB3 (Power)



The TB3 is used to supply 14V to 28V power.

3.4 Pin Assignment of Pocket 16 DO

Pin	Function	Pin	Function
1	GND	14	+5V
2	DO10	15	GND
3	DO11	16	GND
4	DO12	17	GND
5	DO13	18	GND
6	DO14	19	GND
7	DO15	20	GND
8	DO16	21	DO23
9	DO17	22	DO24
10	DO20	23	DO25
11	DO21	24	DO27
12	DO22	25	+5V
13	GND		

CHAPTER 4

SOFTWARE PROGRAMMING

In the distribution diskette, we provide C, PASCAL, ASSEMBLY, and BASIC examples to show how to write software to control stepping motor. It is easy to run under MS/DOS or Windows environment.

4.1 Control Signal

The DO10 to DO17 are used to control stepping motor that was connected to TB1. The DO20 to DO27 are used to control stepping motor that was connected to TB2.

4.2 Software Programming

There are half step and full step control string to control stepping motor. To control stepping motor, please follow the control sequence that specifies in the below, and repeat output these control sequences from pocket 16DO box.

The control sequence of half method are:

	DO17	DO16	DO15	DO14	DO13	DO12	DO11	DO10
	DO27	DO26	DO25	DO24	DO23	DO22	DO21	DO20
1.	0	0	1	1	0	1	1	1
2.	0	0	1	1	0	1	1	0
3.	0	0	1	0	1	1	1	0
4.	0	0	1	0	0	1	1	0
5.	0	0	1	0	0	1	0	1
6.	0	0	1	0	0	1	0	0
7.	0	0	1	1	1	1	0	0
8.	0	0	1	1	0	1	0	0

The control sequence of full step method are:

	DO17	DO16	DO15	DO14	DO13	DO12	DO11	DO10
	DO27	DO26	DO25	DO24	DO23	DO22	DO21	DO20
1.	0	0	0	0	0	0	0	0
2.	0	0	0	0	0	0	1	0
3.	0	0	0	1	0	0	1	0
4.	0	0	0	1	0	0	0	0

APPENDIX A

WARRANTY INFORMATION

1. Copyright

Copyright 1996 DECISION COMPUTER INTERNATIONAL CO., LTD. all rights reserved. No part of POCKET ADDIO software and manual may be reproduced, transmitted, transcribed, or translated into any language or computer language, in any form or by any means, electronic, mechanical, magnetic, optical, chemical, manual, or otherwise, without the prior written permission of DECISION COMPUTER INTERNATIONAL CO., LTD.

Each piece of POCKET ADDIO package permits user to use POCKET ADDIO only on a single computer, a registered user may use the program on a different computer, but may not use the program on more than one computer at the same time.

Corporate licensing agreements allow duplication and distribution of specific number of copies within the licensed institution. Duplication of multiple copies is not allowed except through execution of a licensing agreement. Welcome call for details.

2. Warranty Information

POCKET ADDIO warrants that for a period of one year from the date of purchase (unless otherwise specified in the warranty card) that the goods supplied will perform according to the specifications defined in the user manual. Furthermore, the POCKET ADDIO product will be supplied free from defects in materials and workmanship and be fully functional under normal usage.

In the event of the failure of a POCKET ADDIO product within the specified warranty period, POCKET ADDIO will, at its option, replace or repair the item at no additional charge. This limited warranty does not cover damage resulting from incorrect use, electrical interference, accident, or modification of the product.

All goods returned for warranty repair must have the serial number intact. Goods without serial numbers attached will not be covered by the warranty.

Transportation costs for goods returned must be paid by the purchaser. Repaired goods will be dispatched at the expense of POCKET ADDIO.

To ensure that your POCKET ADDIO product is covered by the

