

PERSONAL COMPUTER BASED ACCOUNTING

AND FINANCIAL STATEMENTS

PERSONAL FINANCIAL STATEMENTS
AND ACCOUNTING SYSTEMS
1988

c/N 5093

1100051273

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LP 7 FST 5 2007



1100051273
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PERSONAL COMPUTER BASED OSCILLOSCOPE

By

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**Research Report submitted in partial fulfillment of
the requirement for degree of
Bachelor of Applied Sciences (Physics Electronics and Instrumentations)**

**Department of Physical Sciences
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UNIVERSITI MALAYSIA TERENGGANU
2007**

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PENGAKUAN DAN PENGESAHAN LAPORAN PROJEK PENYELIDIKAN I DAN II

Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk: **PERSONAL COMPUTER BASED OSCILLOSCOPE** oleh **NOR BAIYYAH BINTI MOHD NOR SAIDI**, no matrik **UK10290** telah diperiksa dan semua pembetulan yang disarankan telah dilakukan. Laporan ini dikemukakan kepada Jabatan Sains Fizik sebagai memenuhi sebahagian daripada keperluan Ijazah Sarjana Muda Sains Gunaan (Fizik Elektronik dan Instrumentasi), Fakulti Sains dan Teknologi, Universiti Malaysia Terengganu.

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AKNOWLEDGEMENT

I am fully thankful to ILLAHI for its blessing which the biggest factors for me in completing this Final Year Project as provision to graduate in Bachelor of Applied Science (Physics electronic and instrumentation). In this opportunity, I would like to express my deepest gratitude to my respect and caring supervisor, Mrs. Wan Mariam binti Wan Muda for her help and guidance throughout this thesis. I am very thankful to her for all the advices, motivations, ideas, opinions, comments and commitments. Not forget to my mother and family, a million thanks I wish because always support and prayed for me to be more spirit and be the best.

I am also full of gratitude to all lecturers and staff in the Department of Science Physics, especially Mr. Ahmad Zaki bin Annuar, Mr. Mohd Razman Ngah and Mr. Wan Noor Azhar bin Wan Jusoh in helping me learning the programming and for facilities. It is pleasure and wonderful experience to have opportunity to work with all of them. To Mr. Muhamad Zailani Daud and Mr. Mohd Faiz Hassan greatest thankful I wish for their helping and opinions.

Beside that, I am grateful to Mr. Mohd Ikmar Nizam bin Mohamad Isa as the coordinator for the Final Year Project and for his advices. To Assoc. Professor Dr. Senin bin Hassan, Head of Science Physics Department also thankful. In this field, I would like to appreciate all my beloved friends, especially physics third year students, for their support and helping in complete my project. The special thanks goes to Fairol Afira Mohd Fadzil, Nik Aziz Nik Ali, Zaidi bin Hussin, Bhoman bin Misson, Mohd Khairul Azli bin Latiff, Nurul A'in Ahmad Latif, Siti Nur Faizah Ismail, Azlina Hassan, Nurul Hiqmah Nordin and Nurul Ai'in Morsid for support. Thank you very much.

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LIST OF ABBREVIATION/ SYMBOLS

ABBREVIATION

AC	Alternative current
ADC	Analog to digital converter
Add	Address
CH	Channel
CRO	Cathode ray oscilloscope
CRT	Cathode Ray Tube
DUART	Dual Universal Asynchronous Receiver/Transmitter
GUI	Graphical user interface
Obj	Object
ORG	Origin
PC	Personal computer
PIC	Peripheral integrated circuit
VB	Visual Basic
68K	68000

SYMBOLS

C	Capacitance
f	Frequency
FF	Insert value
R	The resistance of the resistor
R_i	Input resistance
R_o	Output resistance
T	Timebase
T	Temperature of the resistor
T_0	Normal temperature
$TC1$	First order temperature coefficient
$TC2$	Second order temperature coefficient
V_i	Input voltage
V_o	Output voltage
V_p	Voltage from power supply
#	Immediate

LIST OF APPENDIXES

APPENDIX

- A Motorola training system catalog.
- B Coding in assembly language
- C Multisim interface
- D LM741 user guide

ABSTRACT

This research is focusing on how to build a PC based oscilloscope. The aim of this project is to produce the low cost of oscilloscope and easily oscilloscope. PC based oscilloscope is developed using the combination of hardware and software designs. The hardware design like analog circuit is used to produce the output voltage in the range of 0V to 5V. The analogue circuit, firstly is created using Multisim software and then is converted to the breadboard with real components. The Motorola 68000 microprocessor training system consist of analog to digital converter and dual universal asynchronous receiver/transmitter (DUART) integrated circuit (IC) which can be used to convert the analog circuit to digital and send the data to personal computer (PC). The digital input is in hexadecimal number. The Visual Basic 6.0 software is very important to design oscilloscope. This project will be completed when the PC base oscilloscope can be stand alone.

ABSTRAK

Secara keseluruhan projek ini menerangkan bagaimana untuk membina satu PC based oscilloscope. Matlamat utama dalam menjalankan projek ini adalah untuk menghasilkan osiloskop yang murah dan mudah. Komputer yang berdasarkan osiloskop ini dibina dengan hasil gabungan antara rekabentuk perkakasan dan perisian. Rekabentuk perkakasan adalah termasuk dengan litar analog. Litar analog ini dibina untuk menghasilkan voltan keluaran di antara 0 V hingga 5V. Untuk permulaan, litar tersebut direkabentuk melalui perisian Multisim dan kemudiannya dipasang pada papan litar dengan komponen-komponen yang betul. Sistem latihan Motorola 68000 mikroprosesor terdiri daripada litar integrasi (IC) penukar analog kepada digital dan pemancar/penerima tidak segerak dua semesta (DUART) yang digunakan untuk menukarkan litar analog kepada digital dan menghantar data kepada komputer. Keluaran yang terhasil oleh sistem mikroprosesor tersebut adalah dalam bentuk nombor hexadecimel. Perisian Visual Basic 6.0 penting dalam membina osiloskop. Projek ini akan terlaksana dengan jayanya apabila osiloskop boleh di gunakan tanpa perisian Visual Basic.