



BASIC COMPUTER INTERFACE CONTROL TRAINER

CIC-100



CIC-100 is an educational equipment for computer interface control experiments and to enhance designing capabilities. CIC-100 comes with comprehensive instruction material which explains all relevant informations and experiments in simple, easy to understand terms. Students will be lead step by step through the various experiments into the world of computer interface control technology which could promote designing capabilities in the future.

FEATURES:

- Suit to IBM PC XT/AT or compatible computer
- Be controlled by BASIC, ASSEMBLY and C language.
- Input/Output drive, control RELAY, STEP MOTOR, LED, SPEAKER ... etc directly.
- Independent I/O interface circuit could be connected to another system by user.
- Over 800 pin solderless breadboard for external circuit to experimentalize and test.
- User could make choice 6 external module to offer applied electrical equipment testing.
- Comprehensive experiment manual.

SPECIFICATIONS:

1. Connect with IBM PC/XT/AT or other compatibles computer.
2. Analog signals input: input circuit transform Light, Temp, Sound, external ... etc of Test-Measuring instrument.
3. Input/Output drive: control Relay, Step Motor, LED, Speaker.
4. I/O Control: 2 sets of programmable peripheral interface card (8255A)
5. One I/O control IC: 8255A port to be drawn by 2mm testing copper nail, and could be connected to other systems by user.
6. D.C. +5V/2A power supply could be used to test.
7. Material of circuit board: penetrate double size Fiber glass board.

EXPERIMENT CONTENTS:

1. System Set up and Functions Test.
2. LED Output Control
3. RELAY Control Relay
4. Switch Input Control
5. Speaker Output Control
6. A/D Converter Control
7. D/A Converter Control
8. V/F Converter Control
9. F/V Converter Control
10. RED/GREEN Traffic Lights Control
11. Stepping Motor Control

8. Over universal solderless breadboard for external circuit to experimentalize and test.
9. Could be controlled and applied by BASIC, ASSEMBLY and C language.
10. Input power: AC 110V/220V, 60Hz.
11. Dimensions: 325 x 250 x 95mm (L x W x H)
12. Weight: 4kg
13. Accessories:
 - A. 25P-25P cable, 100cmL.
 - B. Demo disk
 - C. Fuse
 - D. AC cord



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APPLIED CONTROL MODULE: (OPTION)

Except for these six module as follows, it still include DC power supply and appendix those could be in common use.

(1) CI-13001 STEPPING MOTOR CONTROL MODULE

- A. Four phase 2 drive stepping motor.
- B. Step Angle: 1.8° /Rotation, 200 step
- C. Voltage Rating: 12 VDC
- D. Current Rating Phase: 0.44A
- E. Holding-Torque: 4.0Kg-cm
- F. Detent-Torque: 0.36Kg-cm
- G. Module Size: $250 \times 150\text{mm} \pm 5\%$



(2) CI-13002 KEY-PAD MATRIX AND TRAFFIC LIGHT MODULE

- A. 8 LED display, simulates traffic light module.
- B. 16 key, 4×4 key-pad matrix.
- C. Mechanical style KEY-PAD.
- D. Module Size: $250 \times 150\text{mm} \pm 5\%$



(3) CI-13003 ADC MODULE

- A. 8 bit ADC
- B. Voltage Rating: $\pm 5\text{V}$
- C. Settling Time: $\leq 200\mu\text{s}$
- D. Input Voltage Range: $0 - +5\text{V}$
- E. Could connect with CMOS, TTL
- F. Module Size: $250 \times 150\text{mm} \pm 5\%$



(4) CI-13004 DAC MODULE

- A. 8 bit DAC
- B. Error: $\leq 1\%$
- C. Convert Time: $\leq 150\mu\text{s}$
- D. Module Size: $250 \times 150\text{mm} \pm 5\%$



(5) CI-13005 VFC MODULE

- A. Input Voltage Range: $0.1\text{V} - 10\text{V}$
- B. Input Resistance: $\geq 1\text{M}\Omega$
- C. Output: Square Wave, $0.1\text{Hz} - 10\text{KHz}$
- D. Adjustable GAIN, OFFSET
- E. Module Size: $250 \times 150\text{mm} \pm 5\%$



(6) CI-13006 FVC MODULE

- A. Input Frequency: $0 - 4.3\text{KHz}$
- B. Input Wave: $\pm 0.2 - \pm 5\text{V}$, Symmetrical Wave.
- C. Output Voltage: $0 - 4.3\text{V}$
- D. Analysis: 0.1mV
- E. Adjustable GAIN, OFFSET
- F. Module Size: $250 \times 150\text{mm} \pm 5\%$



(7) CI-18001 POWER MODULE

- A. $+ 5\text{V DC} \pm 4\%$ @ 500mA.
- B. $- 5\text{V DC} \pm 4\%$ @ 200mA.
- C. $\pm 12\text{VDC} \pm 4\%$ @ 200mA.
- D. Power Consumption: 16W Maximum.
- E. Dimension: $130\text{mm} \times 92\text{mm} \times 69\text{mm}$. (W x L x H)

(8) ACCESSORIES (CI-18003)

- A. Connect Leads: $2\text{mm} \times 2\text{mm}$, 450mmL, 20pcs
- B. CIC-100 Experiment Manual
- C. CIC-100 Module's Software