

- (1)POWER SWITCH/ POWER INDICATOR
- (2)VARIABLE POSITIVE POWER
- (3)VARIABLE NEGATIVE POWER
- (4)FREQUENCY VARIABLE
- (5)FREQUENCY RANGE
- (6)AMPLITUDE VARIABLE
- (7)PULSER SWITCHES
- (8)16 BITS DATA SWITCHES
- (9)UNIVERSAL CONNECTOR FIXED HOLDERS
- (10)16 BITS LED DISPLAYS
- (11)MODE SELECTOR
- (12)BCD DISPLAYS
- (13)DIGITAL PROBE
- (14)BREADBOARD



M21-5000

DIGITAL TRAINING SYSTEM

3. CAUTION

- 3.1 When operating is finished, put it in a dry place of good ventilation, and keep it clean. If it is not in use for a long period, pull off the power supply plug for storage.
- 3.2 For maintenance, input voltage must be cut off.

4. ACCESSORIES

- 4.1 Instruction manual 1 copy
- 4.2 Power cord 1 pc
- 4.3 Breadboard 1 pc
- 4.4 Connector cord 20cm 20 pcs
10cm 10 pcs
- 4.5 Fuse 1 pc

Shanghai MCP Corp.

M10-5000 is one of high level, high quality, advanced digital trainer, which combines all essential function of digital experiment. It is equipped with removable breadboard, DC power supply, pulse generator, two digits of 7 segment LED displays, 16 bits LED displays, two pulse switches. Additionally, it is with the unique design of universal connector, which reserves fixed holders on the panel in order to be connected with various connectors for the convenience of developing interface circuit. As far as cost-effectiveness is concerned, its versatile function makes users unnecessary to supplement other experiment equipments. In a word, it is ideal for the students of high schools, colleges, vocational training schools, universities and research departments.

1. SPECIFICATIONS

1.1 SOLDERLESS BREADBOARD:

Interconnected with 2720 tie points nickel plated contact, fitted all DIP sizes and all components with lead and solid wire AWG # 22-30 (0.3-0.8mm). It can be changed and replaced for different purpose and can be connected with demonstration panel. Therefore, it is very convenient for both teachers and students.

1.2 DC POWER SUPPLY

- A. Fixed DC output: +5V, 1A
- B. Fixed DC output: -5V, 1A.
- C. Variable DC output: +3V to +15V, 1A.
- D. Variable DC output: -3V to -15V, 1A.

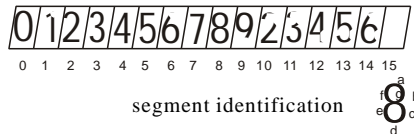
1.3 MODE SELECTOR SWITCH

When the switch is put on "TTL" or "CMOS" position, the input or output of pulse generator, pulse switches, 16 bits data switches digital probe, 16 bits LED display will meet the HI or LO level of "TTL" or "CMOS"

1.4 TWO DIGITS OF SEGMENT LED DISPLAY

(A) Output display

Numerical designs and resultant displays



(B) Function tables

Decimal Or Function	Inputs				Outputs								
	D	C	B	A	a	b	c	d	e	f	g		
0	L	L	L	L	H	H	H	H	H	H	L		
1	L	L	L	H	L	H	H	L	L	L	L		
2	L	L	H	L	H	H	L	H	H	L	H		
3	L	L	H	H	H	H	H	L	L	L	H		
4	L	H	L	L	L	H	H	L	L	H	H		
5	L	H	L	H	H	L	H	H	L	L	H		
6	L	H	H	L	L	L	H	H	H	H	H		
7	L	H	H	H	H	H	H	L	L	L	L		
8	H	L	L	L	H	H	H	H	H	H	H		
9	H	L	L	H	H	H	H	L	L	H	H		
10	H	L	H	L	L	L	L	H	H	L	H		
11	H	L	H	H	L	L	H	H	L	L	H		
12	H	H	L	L	L	H	L	L	L	H	H		
13	H	H	L	H	H	L	L	H	L	H	H		
14	H	H	H	L	L	L	L	H	H	H	H		
15	H	H	H	H	L	L	L	L	L	L	L		

Pulse generator:

- (A) Duty cycle: 50%
- (B) Frequency range: 1Hz ~10Hz
10Hz ~100Hz
100Hz ~1kHz
1kHz ~10kHz
10kHz ~100kHz
100kHz ~ 1MHz
- (C) Amplitude: 0—10 V_{pp} variable
- (D) TTL/CMOS mode output:
TTL: 5 V_{pp}
CMOS: +V_{DC}pp (DEPENDS ON VARIABLE DC OUTPUT)

1.5 SIXTEEN BITS LED DISPLAY:

16 LED's separate input terminals. The LED will be lighted up when input red at "HI level", and it will be lighted green when it is at "LO level".

1.6 TWO PULSE SWITCH

(WITH 2 SET OF OUTPUT: (A, A, B, B) 2pcs pushbuttons contain switches debouncer for eliminating the bounce caused by switch from "open" to "close" or from "close" to "open" position.

1.7 SIXTEEN BITS DATA SWITCHES:

16pcs toggle switches and corresponding output point. When switch is set at "down" position, the output is LO level; contrarily, it is to be HI level while setting at "up" position.

1.8 UNIVERSAL CONNECTOR FIXED HOLDER:

It reserves universal connector fixed holder on the panel in order to be connected with various universal connectors, which are available as below, all these accessories are optional:

- (1). Straight header connector 60 pin
- (2). D sub connector 25 pin, male & female
- (3). Card edge connector 3.96mm 56 pin
- (4). Card edge connector 2.54mm 62 pin
- (5). Dip sockets connector 28 pin & 40 pin

1.9 DIMENSIONS: 250×95×325mm (W×H×D)

1.10 WEIGHT: 4.3kg

2. CONTROLS AND DESCRIPTION OF FRONT PANEL

