

## M21-7000

### Feature

- High level, high quality digital-analog trainer
- Combines all essential function of analog and digital experiment
- With removable breadboard, DC power supply, function generator, two pulse switches, 2 1/2 inch 8 ohm 0.5W speaker and etc.

### Specification

#### 1. SOLDERLESS BREADBOARD:

Interconnected with 2820 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.

#### 2. DC POWER SUPPLY:

- A. Fixed DC output: +5V, 1A
- B. Fixed DC output: -5V, 1 A
- C. Variable DC output: 0V to +15V, 1 A.
- D. Variable DC output: 0V to - 15V, 1 A.

#### 3. POTENTIOMETERS:

- A. Variable resistor VR1 = 1k $\Omega$
- B. Variable resistor VR2 = 100k $\Omega$

#### 4. FUNCTION GENERATOR:

- (A) Frequency range: 1Hz–10Hz  
 10Hz–100Hz  
 100Hz–1kHz  
 1kHz–10kHz  
 10kHz–100kHz

#### (B) Amplitude

- Sine wave output: 0–10 V<sub>pp</sub> variable
- Triangle wave output: 0–10 V<sub>pp</sub> variable
- Square wave output: 0–10 V<sub>pp</sub> variable
- TTL mode output: 4 V<sub>pp</sub>

#### 5. 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.

#### 6. TWO PULSE SWITCH:

(WITH 2 SET OF OUTPUT: (A<sup>-</sup>, A<sup>+</sup>, B<sup>-</sup>, B<sup>+</sup>))  
 2pcs pushbuttons contain switches debouncer for eliminating the bounce caused by switch from “open” to “close” or from “close” to “open” position.

#### 7. SPEAKER:

2-1/2 inch diameter, 8 ohm/0.5W to be used for load.

#### 8. FOUR CHANNEL ADAPTOR:

Both of the two banana sockets' and two BNC jacks' point tips are changeable. It is suitable for M21-7000 to be connected with peripherals.

#### 9. TWO DIGITS OF 7 SEGMENT LED DISPLAY:

- (A) Output display  
 Numerical designs and resultant displays



0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

segment identification



**M21-7000**

### (B) Function tables

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

#### 10. SIXTEEN BITS LED DISPLAY:

16 red LED's separate input terminals. The LED will be lighted up when input is at “HI level” ,and it will be turned off when it is at no input or at “LO level” .

#### 11. OTHER STANDARD ACCESSORIES:

- (1) Power cord
- (2) Pin: 10cm 20pcs/20cm 20pcs
- (3) User manual

12. INPUT VOLTAGE: 110~127VAC $\pm$ 10% 60Hz, 220~240 $\pm$ 10% 50Hz Switchable

13. DIMENSIONS(W $\times$ H $\times$ D): 258 $\times$ 95 $\times$ 334mm

14. WEIGHT: 4.5kg