# ANALOG & DIGITAL TRAINING SYSTEM

## M21-7000  $\text{CE}$

### 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 = 1kΩ
B. Variable resistor VR2 = 100kΩ

**4. FUNCTION GENERATOR:**
(A)Frequency range: 1Hz  10Hz
　　　　　　　　　10Hz  100Hz
　　　　　　　　　100Hz  1kHz
　　　　　　　　　1kHz  10kHz
　　　　　　　　　10kHz  100kHz

(B)Amplitude
　　Sine wave output：0  10 Vpp variable
　　Triangle wave output：0  10 Vpp variable
　　Square wave output：0  10 Vpp variable
　　TTL mode output: 4 Vpp

**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: ($\overline{A}$, A ,$\overline{B}$, B))
2pcs pushbuttons contain switches debouncer for eliminating the bounce caused by switch from "open" to "close" or from "close" to "open" position.
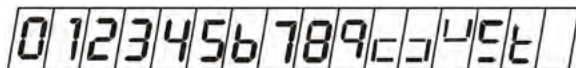
**7. SPEAKER:**
2-1/2 inch diameter, 8 ohm/0.5W to be used for load.

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

**(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 | L | 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. 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:
optional accessories:
(1) Straight header 60 pin
(2) Card edge connector 2.54mm 62pin
(3) D sub25 pin  connector, male & female
(4) Card edge connector 3.96mm 56pin
(5) Dip sockets connector 28 pin & 40 pin

**12. OTHER STANDARD ACCESSORIES:**
(1) Power cord
(2) Pin: 10cm 20pcs/20cm 20pcs
(3) User manual

**13. INPUT VOLTAGE:** 110~127VAC±10% 60Hz, 220~240±10% 50Hz Switchable

**14. DIMENSIONS(W×H×D): 258×95×334mm**

**15. WEIGHT: 4.5kg**