

OMEGA TYPE ANALOG LAB is intended for elementary as well as advance training of analog electronics. The trainer covers regular analog circuits by solder-less interconnections on breadboard and as well as compatible with all optional modules, through use of 2mm brass terminals and patch cords. Various DC regulated power supplies, Function Generator, DMM, Continuity Tester etc are in-built. The unit housed in attractive enclosure is supplied with mains cord, patch cords, Instruction manual and **Component Set**.

EXPERIMENTAL COVERAGE:

- 01 Study of Diodes in DC circuits
- 02 Study of Light Emitting Diodes in DC Circuits
- 03 Study of Half wave rectifier
- 04 Study of Full wave rectifier
- 05 Study of Zener Diode as a voltage regulator
- 06 Study of transistor series voltage regulator
- 07 Study of transistor shunt voltage regulator
- 08 Study of Low pass filter
- 09 Study of High pass filter.
- 10 Study of band pass filter
- 11 Study of CE configuration of NPN transistor
- 12 Study of CB configuration of NPN transistor
- 13 Study of CE amplifier
- 14 Study of Monostable multivibrator using transistor
- 15 Study of Bistable multivibrator using transistor
- 16 Study of Astable multivibrator using transistor
- 17 Study of CB Amplifier (PNP)
- 18 Study of CC Amplifier (PNP)
- 19 Transistor Audio Amplifier
- 20 Two Stage R.C. Coupled Transistor
- 21 Inverting Amplifier
- 22 Non-inverting Amplifier
- 23 Integrating Amplifier for A.C input Signal
- 24 Differentiator Amplifier
- 25 Square Wave Generator

FEATURES:

- 01 Bread Board:
Unique solder-less large size, spring loaded breadboard consisting of two Terminal Strips with 1280 tie points and 4 Distribution Strips with 100 tie points each, totaling to 1680 tie points. (Size:112mm x 170mm approx)
- 02 Regulated DC Power Supply:
+5V at 1 Amp, -5V at 1Amp, +12V/0 to 20V at 500mA, and -12 V/0 to -20V at 500 mA
- 03 AC Supply:
5-0-5V, 10-0-10V at 100mA. Can be used as



- 5V,10V,15V,20V and also as center tap
- 04 Function Generator:
Sine / Square / Triangular waveforms frequency 1 Hz to 110 KHz in 5 Steps. Variable output 50mV ~10Vpp
- 05 Modulation Generator:
Sine / Square / Triangular wave forms frequency 1 Hz to 110 KHz in 5 Steps. Variable output 50mV ~ 10Vpp with 100 KHz Modulation
- 06 Digital Meter (3½ Digit):
Dual range DC voltmeter 0-20 V / Ammeter 0-200mA
- 07 Continuity Tester:
For testing the continuity. Provided with Beeper Sound
- 08 Potentiometers:
3 Potentiometers (1K and two 100K) with terminals
- 09 On Board Switches:
2 Switches Single pole double through
- 10 Power:
230 V ± 10%, 50 Hz
- 11 Components Provided:
Resistance ± 5% 1W 100E/1, ½ W 47E/2, 100E/1, 220E/1, 390E/1, 1K/1, ¼W 100E/1, 220E/2, 270E/1, 330E/1, 1K/3, 2K/2, 3K/3/1, 4K7/2, 5K1/1, 5K6/1, 10K/2, 12K/1, 15K/2, 47K/2, 68K/1, 100K/4, 180K/2, 220K/1 Capacitor 0.1uF/1, 0.22uF/3, 10uF/25V/3, 22uF/25V/2, 47uF/25V/2, 100uF/25V/1, Diode 1N 4007/4, LED 5mm Red/1, Zener Diode 5V6/400mW/1, Transistor SL 100/1, SK 100/1, BC 107/2, BC 177/2, IC 741/2

LIST OF ACCESSORIES:

- 01 Mains cord, Operating and Experimental manual, Red & Black patch cords (2mm with Pin) 10 each, Red & Black patch cord (Pin to Pin) 10 each & Component Set
- 02 Instruction manual : Strongly supported by detailed operating instructions
- 03 Weight : 5 Kg. (Approx.)
- 04 Dimension : W 415 x H 165 x D 315

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We are committed to the continuous development of our products, and therefore reserve the right to amend specifications without prior notice.

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OPTIONAL MODULES:-

Apart from above given experimental coverage of 18 experiments on breadboard, customers can purchase these optional modules. These are ready to use modules with wired components & circuit schematic drawn on top compatible to use Bellow modules can be used with our Following Training Boards. Digital -Analog Lab (**DAL-1043**),



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|---|--|
| A001 Study of Diode in DC circuits | A026 Study CB configuration of PNP transistor |
| A002 Study of Light Emitting Diodes in DC Circuits | A027 To study CC configuration of PNP transistor |
| A003 Study of Half wave rectifier | A028 Study full wave dual polarity supplies |
| A004 Study of Full wave rectifier | A029 Study of FET characteristics |
| A005 Study of Zener Diode as a voltage regulator | A030 Verify superposition theorem |
| A006 Study of transistor series voltage regulator | A031 Verify thevenin's theorem |
| A007 Study of transistor shunt voltage regulator | A032 Verify reciprocity theorem |
| A008 Study of Low pass filter | A033 Study of Phase shift audio oscillator (Solid State) |
| A009 Study of High passfilter | A034 Verify kirchoff's law (V& I) |
| A010 Study of band pass filter | A035 Verify ohm's law |
| A011 Study of CE configuration of NPN transistor | A036 Ideal resistance characteristics |
| A012 Study of CB configuration of NPN transistor | A037 Verification of series law of resistance |
| A013 Study of CE amplifier | A038 Verification of parallel law of resistance |
| A014 Study of Monostable multivibrator using transistor | A039 Verify maximum power transfer theorem |
| A015 Study of Bistable multivibrator using transistor | A040. Study of series and parallel resistance capacitors and inductance circuits |
| A016 Study of Astable multivibrator using transistor | A041. Study of basic electrical DC circuits |
| A017 Study CB amplifier (PNP) | A042. Study of AC circuits |
| A018 Study CC amplifier (PNP) | A043. Study of series and parallel resonance and operational amplifier circuits |
| A019 Study of FET amplifier. | A044. Study of power supply circuit, 555 timer and solid state switch |
| A020 Study power supply having two zener diodes in series | A045. Study of difference Amplifier |
| A021 Study dual polarity voltage regulated power supply | A046. Analog to digital converter (using IC ADC 0800) |
| A022 Study the characteristics of photo transistor | Weight : 0.7 Kg. (Approx) |
| A023 To practically understood the operation of a 7-segment LED display | Dimension : W 176 x H 131 x D 37 |
| A024 To Study CC configuration of NPN transistor | |
| A025 Study CE configuration of PNP transistor | |

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