



About The Trainer

The Experimental trainer for AC/DC Sources is a useful, low cost, multipurpose, minilab for learning the basic discrete, and passive components starting from this characteristics to simple and more complex applications, The kit saves time and money in experimentation as no soldering is required to try out new circuits and components can be reused again and again. All inputs / outputs & components (bi- experimentation are terminated on 4mm brass terminations, interconnect is through 4mm patch cords. Various DC /AC regulated power supplies are built in. The kit is housed in an sturdy designed powder coated metal enclosure.

Features

- A very useful component trainer to show all the components used in electronics circuits / laboratory.
- Useful, low cost. Multipurpose, minilab for linear, digital & hybrid circuits.
- Saves time and money in experimentation as no soldering is required to try out new circuit and component can be reused.
- All inputs / outputs & components for experimentation terminated on 4mm brass termination.
- Interconnection through 4mm stackable patch cords.
- Various DC regulated & AC power supplies are built in.
- Housed in an attractively designed sturdy powder coated metal box enclosure.

Technical Specifications

DC Power Supplies	:	Fixed +5V, +9V, 4 I2V Power Supply.
AC Power Supplies	:	Fixed 18-9-0-9-18.
Fixed Resistors	:	10 nos. of fixed resistors value between 100 to 100K
Inductors	:	5 nos. of inductors value between 10 μ H to mH
Potentiometer	:	2 no. of potentiometers value of 10 K & 1M.
Capacitors	:	5 nos. of capacitors value of .01 IA' sec .1 uf.
Electro Capacitors	:	5 nos. of electrolytic capacitors between 4.7uF to 1000uF
Power	:	230V AC10% 5011z.
Manual	:	An instruction manual provided for 30 Basic experiments.
Patch Cord	:	10 nos. of suitable patch cords is provided.

Note: Specifications are subject to change.

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* PHASE LOCKED LOOP IC NE 565

The following experiments can be performed :

01. Measurement of center frequency 'fo'
02. To study Vco sensitivity and linearity
03. Measurement of capture range and lock range
04. To study locking of Vco to harmonic of input signal
05. Detection of F.M. Signal

* FIXED VOLTAGE REGULATOR IC 7812 & IC 7912

The following experiments can be performed :

01. To measure Line Regulation
02. To measure Load Regulation
03. To suppress oscillations at input and output
04. To study minimum input to output voltage
Difference required for proper operation
05. To increase the output voltage using resistors
06. To increase the output voltage using zener diodes
07. To continuously vary the output voltage

FEATURES

The board consists of the following built in parts :

01. 0-30V D.C. at 500mA, continuously variably unregulated Power Supply.
02. $\pm 12V$ D.C. at 250 mA, IC Regulated Power Supply.
03. $\pm 6V$ D.C. at 200 mA, IC Regulated Power Supply.
04. 1 KHz square wave signal source with variable output level.
05. 100 Hz sine wave signal source with variable output level.
06. Pulser for generating trigger pulses.
07. D.C. Ammeter, 65mm rectangular dial with switch selectable ranges of 50 mA, 250mA and 500mA.
08. D.C. Voltmeter, 65mm rectangular dial, dial with switch selectable ranges of 100mV, 1V and 40V.
09. Two toggle switches, NPN power transistor 2N 3055, Transistor BC 177, Two IC 741 Three IC 3130, IC 710, IC 723, IC 3085, IC 555, IC 566, IC 565, IC 7812, IC 7912, Electronic Load, 8 potentiometers, 45 fixed value resistors, 22 capacitors, 3 silicon signal diodes, 3 zener diodes, LED, 3 sets of 3 interconnected sockets each for multi-connections wherever required.

* VARIABLE VOLTAGE REGULATOR IC 723

The following experiments can be performed :

01. To measure Line Regulation
02. To measure Load Regulation
03. To measure Ripple Rejection
04. Application as basic voltage regulator
05. Application as Low voltage regulator (2 to 7V)
06. Application as High voltage regulator (7 to 21V)
07. Application as increased current output voltage regulator Using external NPN power transistor
08. Application as fold back current limiting regulator

* VARIABLE VOLTAGE REGULATOR IC CA 3085

The following experiments can be performed :

01. To measure Line Regulation
02. To measure Load Regulation
03. To measure Ripple Rejection
04. Application as 3 to 23V variable output voltage regulator
05. Application as fixed voltage regulator
06. Application as current regulator
07. Application as High Gain Amplifier (upto 100KHz)

Note: Specifications are subject to change.

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