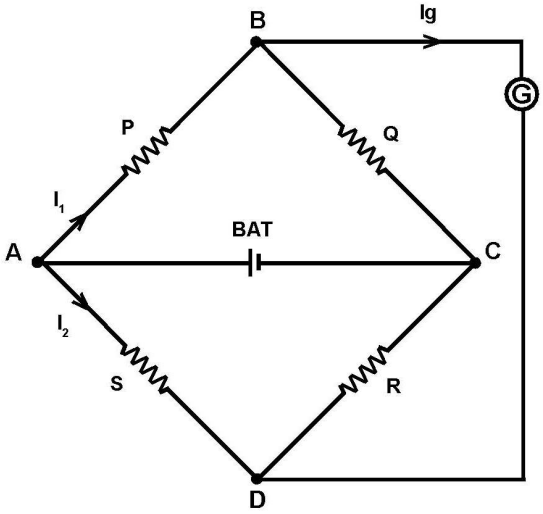
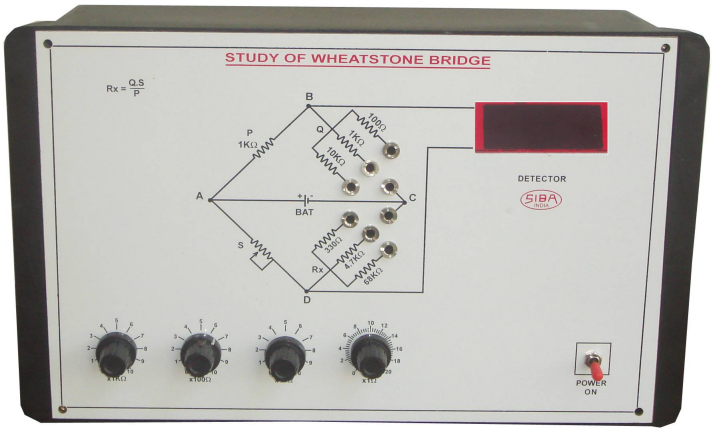
INTRODUCTION:

The Wheatstone bridge is one most important bridge for measurement of Resistance. The present bridge consists four resistance dials in standard arm (S), having known non - inductive resistance as x1K, x100, x10 and x1 + 1%. dials to obtain balance. The last dial is a continuously variable having resolution of 0.2. One ratio arm P has a fixed non inductive resistance of 1000 ohm, where the other arm Q has, three non-inductive resistance 100, 1000 and 10K +1%, gives a ratio of 0.1, 1 and 10, enough for study purpose. The ratio is selectable by mean of patch cord.





Features:

Resistance	: Three decade dials(non-inductive) One continuously variable
Ratio	: Three in 0.1,1 and 10
Galvanometer	: Digital null detection with sensitivity adjustment
Test Resistances	: Three
Mains	: 220V/50Hz AC
Instruction manual	: One
Size	: 320x190x75mm(approx).

EXPERIMENT COVERED

To find unknown resistance using wheatstone bridge

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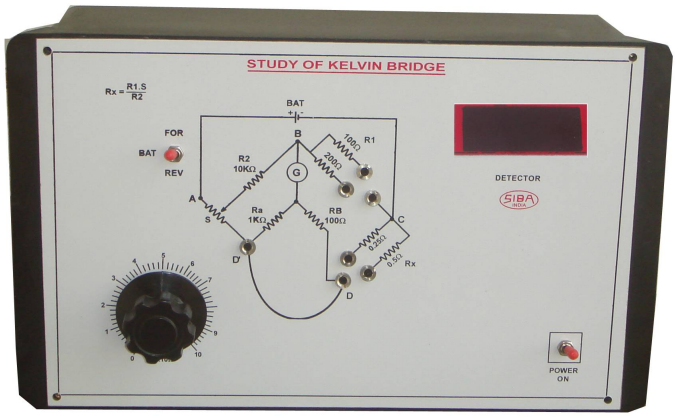
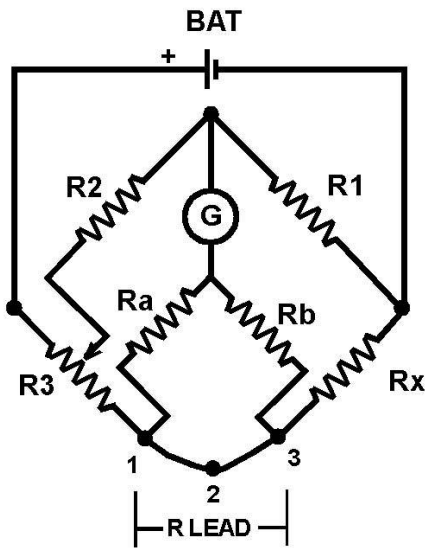
SML 1002
KELVIN BRIDGE

INTRODUCTION:

The Wheatstone bridge is one most important bridge for measurement of resistance,but it suffer from the contact and lead resistance, which plays major role if the resistance under measurement is fractional (<1ohm). For low resistance measurement, the resistance of the leads and contacts becomes significant and cause to introduce error. This can be eliminated by kelvin bridge method. A Kelvin bridge is a modified form of wheatstone bridge, where fractional value resistance are measured by comparing with a standard resistance(s).





Features:

Resistance	: One dial continuously variable
Ratio	: Two
Galvanometer	: Digital for null detection with sensitivity adjustment
Test Resistance	: Two
Switch	: One for battery reverse & forward
Power supply	: in built
Mains	: 220V/50Hz AC
Instruction manual	: One
Size	: 320x190x75mm(approx).

EXPERIMENT COVERED

To find low resistance using kelvin bridge

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INTRODUCTION:

Potentiometer is an instrument for measuring an unknown e.m.f. or potential difference by a known potential difference produced by the flow of a known current in a network of a circuit of known characteristics. Potentiometers are extensively used in measurements where the precision required is higher than what it could be obtained by deflection measurements.

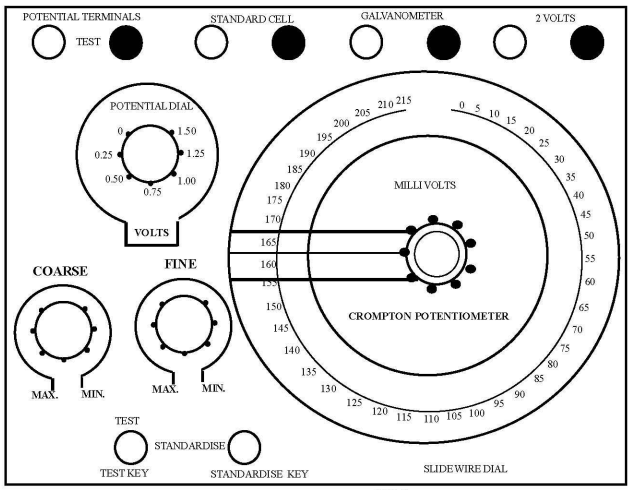

FIG.2

Features:

Potential dial	: One main dial has 6 steps each 0.25V Second slide wire dial calibrated 0 to 215mV and each millivolt is subdivided into 2 parts.
Rheostat	: Two by means of corase & fine resistance dial.
Galvanometer	: Analog 30-0-30
Power supply	: 2V fitted with standard cell
Mains	: 220V/50Hz AC
Instruction manual	: One

EXPERIMENT COVERED

To find unknown voltage using crompton potentiometer

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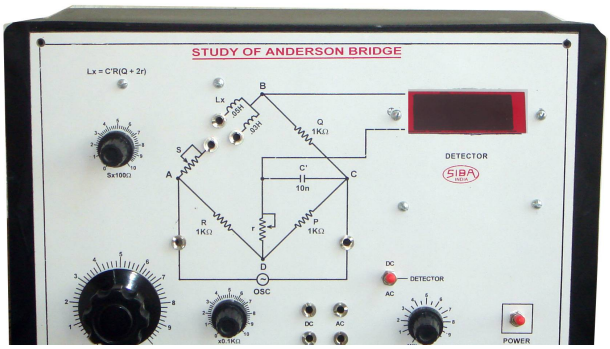
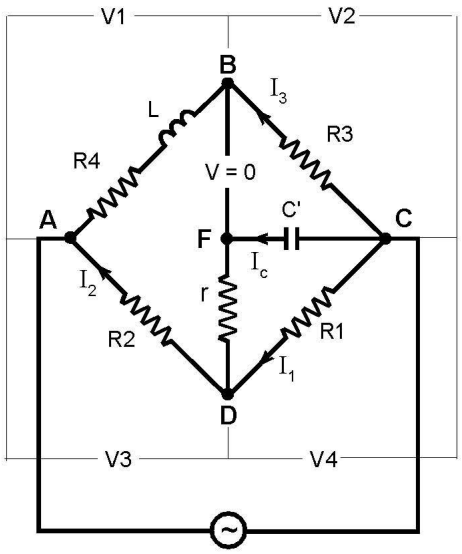
SML 1005
ANDERSON BRIDGE

INTRODUCTION:

The Anderson bridge is one most common bridge for measurement of self inductance of an inductor. The self inductance is determined in term of known capacitance and resistance. This method is quite similar to Maxwell L - C bridge except that, it is modified by inserting another resistive arm (r) in series with C' in P arm.





Features:

Resistance	: Three continuously variable dials 10K,1K,1K
Capacitor	: One fixed value
Galvanometer	: Digital LED display with AC/DC null provision sensitivity adjustment
Test Inductance	: Two
Interconnections	: 4mm sockets & 4 mm patch cord
Signal Source	: in built of 1KHz
Main supply	: 220V/50Hz AC
Instruction manual	: One
Size	: 320x190x75mm(approx).

EXPERIMENT COVERED

To find unknown inductance using Anderson's bridge

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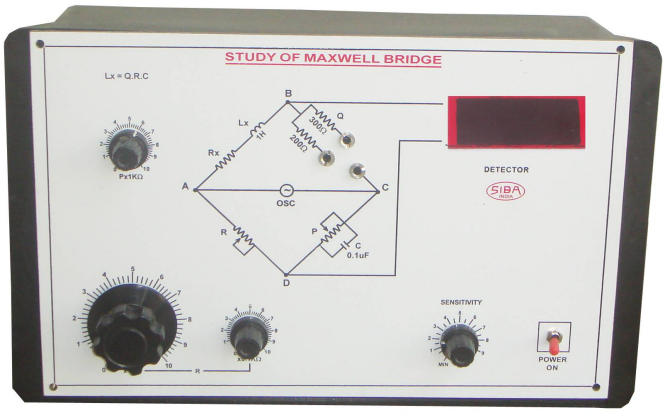
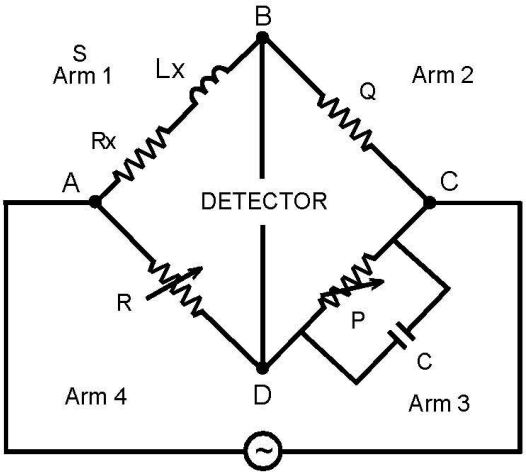
SML 1006
MAXWELL BRIDGE

INTRODUCTION:

The Maxwell inductance / capactive bridge also known as 'Maxwell Wein bridge' .One of the ratio arm (CD) has variable resistance (P) and capacitor (C) in parallel, while other (BC) has non inductive resistance (Q). The arm (CA) has standard variable resistance (R) and unknown inductance (Lx) in (AB) arm with its dc resistance Rx.





Features:

Resistance	: Three continuously variable dials
Capacitor	: One fixed value
Galvanometer	: Digital with sensitivity adjustment
Signal Source	: in built of 1KHz
Test Inductance	: Two
Mains	: 220V/50Hz AC
Instruction manual	: One
Size	: 320x190x75mm(approx).

EXPERIMENT COVERED

To find unknown inductance using Maxwell bridge

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INTRODUCTION:

The bridge determine inductance in term of known capacitance and resistance. The advantage of this bridge to determine inductance over wide range using fixed standard capacitor.

Features:

Resistance	: Three dials continuously variable
Capacitor	: Two fixed value
Galvanometer	: Digital null detector with sensitivity adjustment
Signal Source	: in built of 1KHz
Test Inductance	: Two
Mains	: 220V/50Hz AC
Instruction manual	: One
Size	: 320x190x75mm(approx).

EXPERIMENT COVERED

To find unknown inductance using Owen's bridge

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INTRODUCTION:

Hay's bridge is a modification of Maxwell's bridge and is suitable for measuring inductance of high Q inductors by comparison with standard variable capacitance. By setting the null point we can evaluate the unknown inductance value.

Features:

Resistance	: Three continuously variable dials
Capacitor	: One fixed value
Galvanometer	: Digital with sensitivity adjustment
Signal Source	: in built of 1KHz
Test Inductance	: Two
Mains	: 220V/50Hz AC
Instruction manual	: One
Size	: 320x190x75mm(approx).

EXPERIMENT COVERED

To find unknown inductance using Hay's bridge

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INTRODUCTION:

The Wein's capacity bridge is modified version of desauty bridge, which used to determine capacitance by comparison method.

Features:

Resistance	: Three calibrated potentiometer
Standard Capacitor	: One fixed value
Detector	: Digital
Signal Source	: in built of 1KHz
Test Capacitor	: Two(Selectable)
Mains	: 220V/50Hz AC
Instruction manual	: One
Size	: 460x210x160mm(approx).

EXPERIMENT COVERED

To find unknown inductance using Wein series bridge

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SML 1011
DESAUTY'S BRIDGE

INTRODUCTION:

Desauty`s Bridge trainer is useful for measuring very small value of Capacitance. By setting the null point,we can evaluate the unknown capacitance. To set this point, null detector with amplifier circuit is provided

Features:

Resistance	: One decade dial (non-inductive)
Capacitor	: One variable upto 600pF
Test Capacitors	: Hand made parallel plate of Aluminum sheet one air & second dielectric.
Galvanometer	: Digital
Signal Source	: in built of 1KHz
Mains	: 220V/50Hz AC
Instruction manual	: One

EXPERIMENT COVERED

To find unknown capacitance using desauty's bridge

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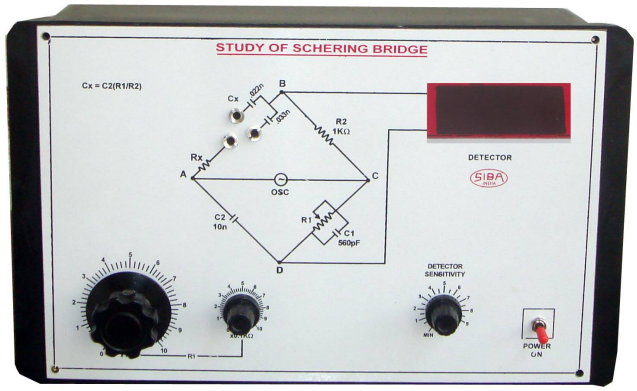
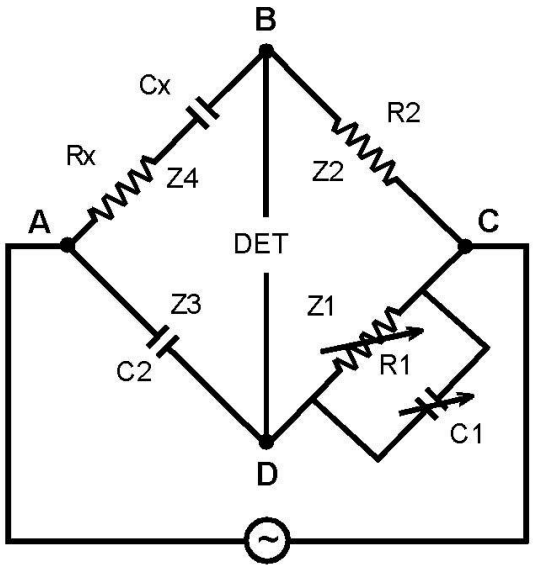
INTRODUCTION:

The Schering bridge is one most important bridge for measurement of capacitance. The capacitance is determined in term of known capacitance and resistance. The unknown capacitance Cx with its resistance (with its losses) is kept in arm AB. A variable capacitor C1, of low power factor is connected across R1 to create the small phase angle at CD to compensate the phase angle required to obtain balance condition.





Features:

Resistance	: Two dial continuously variable
Test Capacitors	: Two
Galvanometer	: Digital null detector with sensitivity adjustment
Signal Source	: in built of 1KHz
Mains	: 220V/50Hz AC
Instruction manual	: One
Size	: 320x190x75mm(approx).

EXPERIMENT COVERED

To find unknown Capacitacne using Schering bridge

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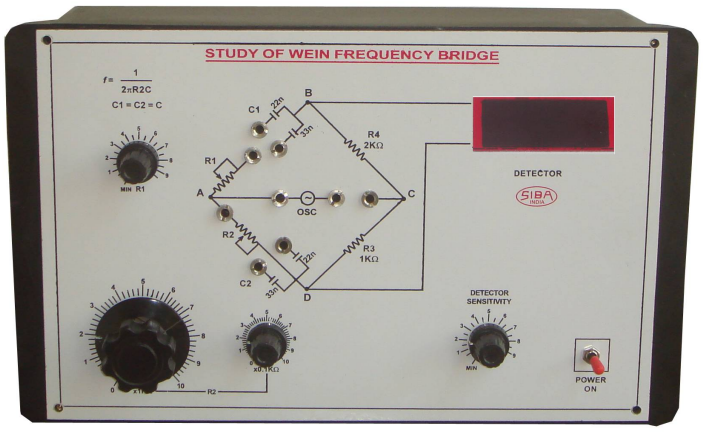
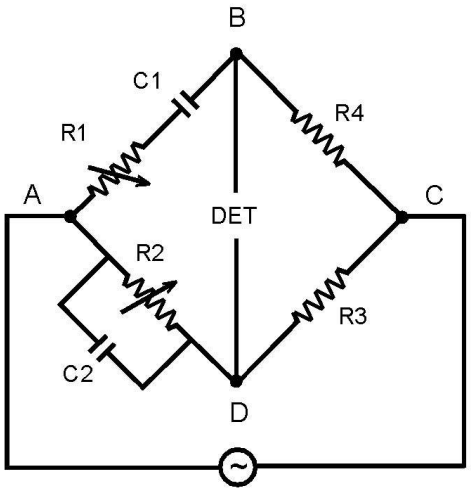
SML 1013
FREQUENCY BY WEIN BRIDGE

INTRODUCTION:

The Wein frequency bridge also known as 'Wein bridge'. Two of the arms has resistance (R3) and (R4) only, while other (AB) has non inductive resistance (R1) seriesed with capacitor (C1). The arm (AD) has non inductive resistance (R2) shunted with capacitor (C2).





Features:

Resistance	: Three dials continuously variable
Capacitors	: Four
Galvanometer	: Digital with sensitivity adjustment
Signal Source	: in built of 1KHz
Mains	: 220V/50Hz AC
Instruction manual	: One
Size	: 320x190x75mm(approx).

EXPERIMENT COVERED

To find Frequency using wein frequency bridge

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