

## STUDY OF JONES CHOPPER (S.C.R. BASED),

MODEL : JC – 701.

A Chopper is a circuit in which a thyristor is used to switch ON supply to the load for a certain interval and the switch off the supply for another certain interval. This cycle of operation is repeated. Choppers are very widely used to obtain a variable dc voltage from a constant DC Voltage. Thus it is a DC – DC converter.



The Jones chopper circuit, two S.C.R.s are used. One is the main SCR and another is auxiliary SCR. Which is used to turn off the main thyristor. Choppers are very widely used in electric traction, trolley cars, mine haulers, D.C. Voltage regulators, marine hoists etc.

### DESCRIPTION :

The set – up consists of :

Unregulated D.C. supply (110 Volt), one tapped inductor, one commutating capacitor, two SCRs, Pulse Generator with separate ON-OFF timings controllable, one lamp load, builtin power supply and complete with working manual and patch cords. Basic block diagram is printed on front panel and all test points are brought out to the banana sockets mounted on the front panel for observations.

\*\* Weight : 6.5Kg Approximately

\*\* Dimension : 250mm × 350mm × 150mm

### EXPERIMENTS :

To study the S.C.R. Chopper operation, controlling DC Motor Speed.

### ACCESSORIES REQUIRED :

1. A general purpose C.R.O.
2. Digital Multimeter.
3. Universal Motor. (Optional)

*Note: There may be any change in specification due to continuous R & D without notice.*

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