



RAPPER CONTROL MODULES

Description and Theory of Operation

This section contains a description of the basic principles of circuit operation for the rapper control system.

Enclosed drawing shows the control module (RCM) layout. For more detailed information and troubleshooting refer to the electrical drawings supplied for the installation. The rapper control system is a capacitive discharge system which consists of the following basic items (quantities will vary per specific installation) interconnected as shown on sketch

- A. RCM (rapper control module)
- B. Thyristor board
- C. Main capacitor
- D. Charging resistor

Upon energizing the RCM with the ON/OFF switch on the front of the RCM enclosure an output of approximately 325 VDC occurs on terminals 10 and 12 and charges the main capacitors. A charging resistor is put in series to limit the current in this charging circuit. The mechanical intensity of the rappers are proportional to the voltage stored in the capacitors, and is adjustable by an Intensity Potentiometer on the face of the RCM enclosure. This potentiometer adjusts the voltage that is applied to the capacitors and is shown on the voltmeter located in the face of the RCM enclosure. After an adjustable length of time (adjustable with the Interval Potentiometer on the face of the RCM) a gating signal occurs on the thyristor gate terminal strip. This gate signal will energize a thyristor on the thyristor board and discharge the capacitors into the coil of the selected rapper.

After the rapper is energized, the charging and interval cycle will continue, until the ON/OFF switch is turned off. A stepping switch will energize all the thyristors on the thyristor board in turn. Depending on the model this will be 8, 12, 16, or 20 rappers.





