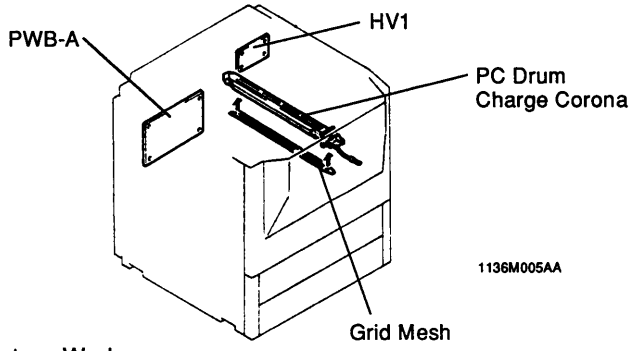
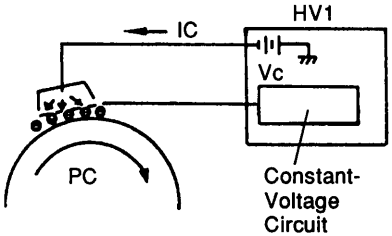
8 DRUM CHARGING

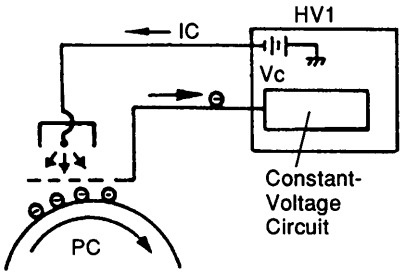
8-1. PC Drum Charge Corona

- The PC Drum Charge Corona in this copier is equipped with a Scorotron Grid which ensures that a DC negative charge is evenly deposited across the entire surface of the PC Drum.
- The grid voltage applied to the Grid Mesh of the PC Drum Charge Corona is varied to compensate for any drop in V_0 which could occur with age or under low temperatures in the morning. This ensures stabilized image quality. (For more details, see "6. IMAGE STABILIZATION SYSTEM.")
- The Constant-Voltage Circuit in High Voltage Unit HV1 maintains the grid voltage in the range between DC-550V and DC-850V according to the Grid Control pulse (PWM) output from Master Board PWB-A.



<How Scorotron Works>





When High Voltage Unit HV1 turns ON, a corona emission from the Corona Wire begins.

↓

A grid voltage according to the Grid Control pulse is being applied to the Grid Mesh.

↓

Since there is a potential difference between the Grid Mesh and PC Drum the negative charges of the corona emission flow through the Grid Mesh to the surface of the PC Drum. This results in the surface being negatively charged.

↓

When the potential of the Grid Mesh becomes equal to that of the PC Drum (i.e., when the potential of the PC Drum becomes the grid voltage set by the Grid Control pulse), the negative corona current flows from the Grid Mesh through HV1 to the ground.