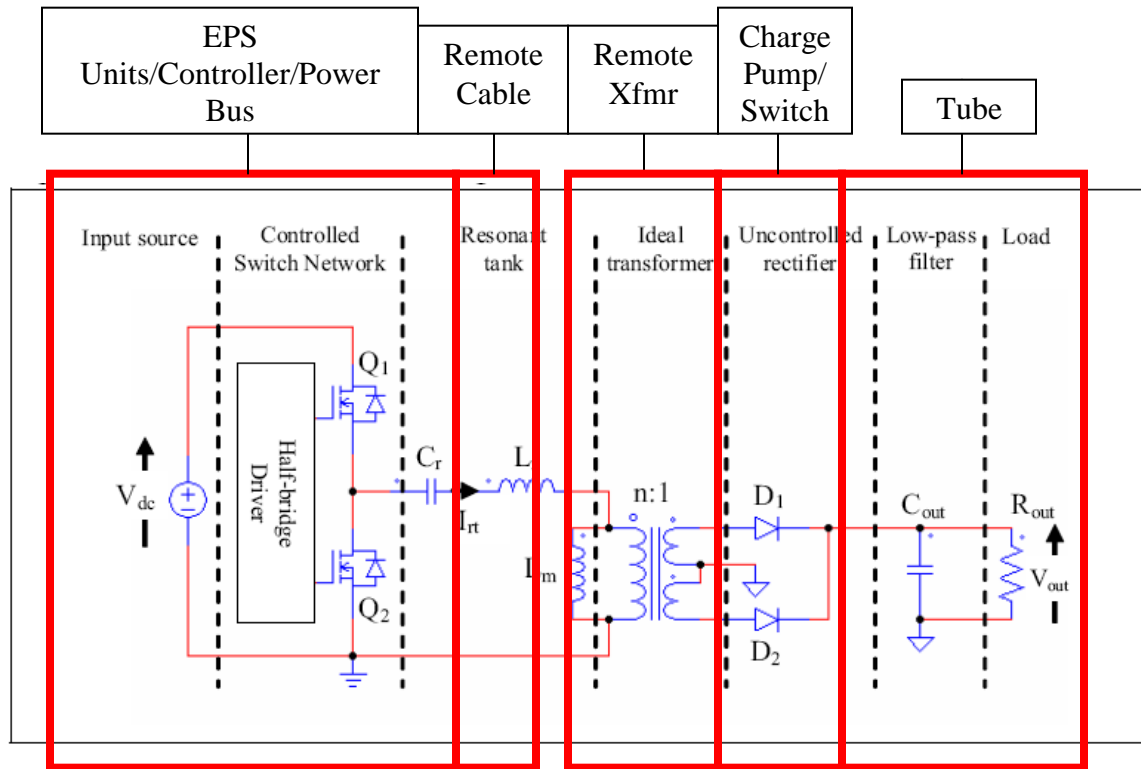


Reference Fig.16



See also: Scanned sheet w/ notes and Ref: Fig.1 doc's.

Power Bus, PFC – Is actually the Input source – V_{dc} , it enables a stable but adjustable voltage for the load by the Half-bridge switches, while the Controlled Switch Network is the EPS Switcher being controlled by (see Ref.1) Power Bus Voltage Detect/Set, Switcher Controller, Hall Effect Device Sense, Charge Pump Output Detect module.

Remote Transmission Cable – Is comprised of C_r and L_r as the 'Length', with L_m being the balanced part of the cable for calculating the Z_i (Input impedance) of the Remote Xfmr.

Remote Xfmr – The Z_i will define the characteristics of the Ferrite core and number of turns required on the primary. Also, note that the center-tap on the secondary-side can be used as a return path to the 'Switcher Controller' to detect if there is an "out-of-balance" in the output to the Charge Pump and shutdown and/or alarm as to a circuit malfunction.

Hall Effect Device – Is placed on an isolated ground-plane and in close proximity of the GAP on the Remote Xfmr to supply the feedback of operational characteristics.

Charge Pump – The D_1 & D_2 Uncontrolled Rectifier and the C_{out} Low-pass filter make up the Cockcroft-Walton charge-pump, only configured in multiple stages as needed.

Gas Discharge Tube – The R_{out} and V_{out} are used to define the timing characteristics of the waveform, as the tube appears as an 'infinite' resistance until ignition voltage is reached, then the tube presents a load of close to a 'dead-short' at the Run-time voltage, which requires a current-limited configuration in the operation of the 'Tube Lighting System'.