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Technical Description of Swing-arm Fluorescent Lamp, Model 3700

This Swing-arm Fluorescent Lamp, Model 3700 is consisting of:

- An line filter comprising two pairs of choke (30mH) and condenser (0.33 μ F) for preventing excessive radio frequency radiation to be fed back to the AC source.
- An electronic adaptor comprising four diodes (1N4004) and two transistors (MJE13003) for converting the 120V/60Hz AC to 70V/47KHz AC output.
- A ballast for choking the current intensity of the fluo lamp.
- A fluo lamp.

Please refer to the block diagram and the circuit diagram when read detailed description as follows:

Input 120V/60Hz electricity is conducted into the line filter located in a plastic enclosure far more apart from the electronic adaptor and the ballast. Then the 120V/60Hz AC electricity is led into a bridge rectifier which consists of 4 diodes (1N4007) of an electronic adaptor to be rectified for get 120V DC supply.

Now, the 120V DC is supplied to the frequency converter which using a multiharmonic oscillator (formed by 2 transistors -- MJE13005) to convert 120V DC into 47 KHz AC.

Then, the ultrasonic frequency 47 KHz AC is led into the choke (1.4 mH) which is in series of the fluorescent tube for keep the fluo lamp working in limited current.

