

The flash is caused by the heater leads inside the tube superheating when power is first applied. The cold resistance of the heater is quite a bit lower than the hot resistance so there is a short current 'burst' and resulting flash. The flash can be quite startling to those not familiar with this phenomenon and results in the question: “ my tubes flash when I turn them on, is this ok?”

True 12AX7's will exhibit this phenomenon. The 12AX7A on the other hand has a controlled heater warmup time for use in series string equipment and does not flash. European tubes are typically 12AX7 while the American made tubes are commonly 12AX7A's.

For whatever reason, series string heaters were not as popular in Europe as in America so most European tubes flash while American made ones do not. Mullards, Amperex, Telefunken all made tubes that flash. Current (2005) production Ei's flash while JJ's do not. I do not know about the Chinese made 12AX7's as I do not use them. GE, RCA, Tung-Sol, etc. Do not usually flash, but some do. Every flashing tube I have had had been labeled 12AX7

In the later days of tube manufacture nearly all 12AX7's were of the 'A' variety whether they were labeled as such or not. Easier to make one type, than to fool around with two different types. The 12AX7A can be used anywhere, while the 12AX7 may not. This is true of all the 12A?7 family as well as many others.

The flash is normal as has been said. I hope this note will help everyone understand why. If I'm wrong about this, let me know. This is what I have figured out from data books and period literature.

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