

The two base-emitter diode drops in our Darlington transistor add up to a 1.2 volt positive going offset; so, in the absence of a video input or at the base of a sync tip, the video driver is biased to a blacker than black sync level of 1.2 volts. With a white video input of 2 volts, the video driver gets biased to its usual 3.2 volts of white level. Thus, our input transistor provides just the amount of offset we need to match the white and black bias levels of our video driver. Note that the old bias network is on the other side of the switch and does nothing in the video position.

The important thing is that the video driver ends up with the same level for white bias and for black bias in either position of the switch.

Tube type sets present