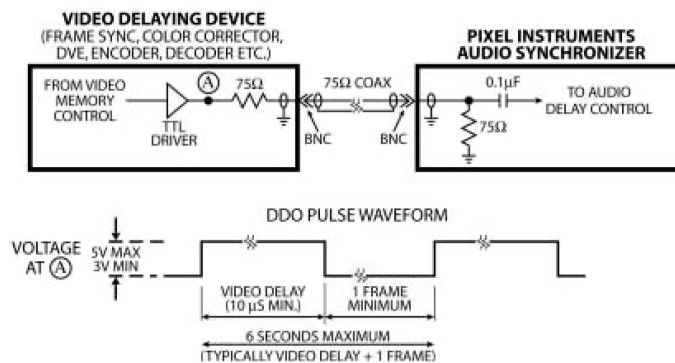


DIGITAL DELAY OUTPUT (DDO) PULSE SPECIFICATION

The Pixel Instruments Audio Synchronizers can automatically track any video delay device (frame sync, DVE, color corrector, encoder, decoder etc.) provided that the video device provides an output signal that conforms to the Pixel DDO specification. Basically, the video device must provide a TTL pulse output where the high period is equal to the current video delay. A typical hardware connection and the pulse specifications are shown below.



Inside the video device the delay signal is typically generated in the memory control circuit and coupled through a TTL driver and series 75Ω resistor to a BNC connector. A 75Ω coax cable connects the output of the video device to the DDO input of the Pixel Audio Synchronizer. Inside the Audio Synchronizer the DDO pulse is terminated in 75Ω and AC coupled to the delay control circuit.

The DDO pulse must be high for a minimum of 10μS, even if the actual video delay is between 0 and 10μS. The DDO pulse must be low for a minimum of 1 frame. The most common arrangement is for the overall period to be the video delay plus one frame. However, the overall period can be up to 6 seconds.