

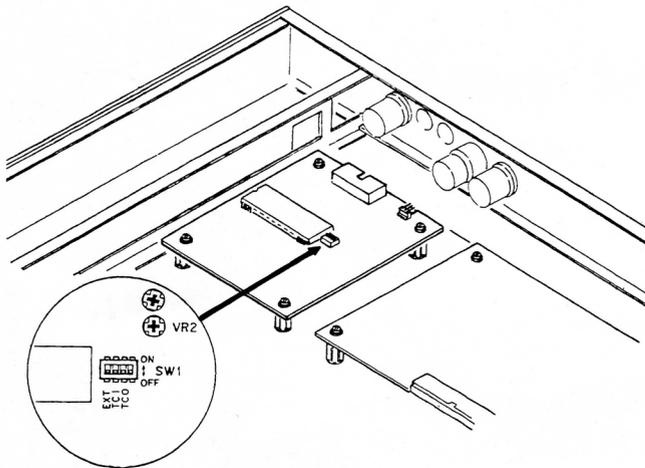
ES-50's Timecode Generator PC Board

Opening the ES-50's top panel provides access to the TC generator. Before that, **BE SURE TO TURN OFF THE ES-50.**

Setting to the desired Frame Standards

Locate switch block SW1 on the TC generator PC board and set it to the desired position by referring to the table below.

Switch Position			Frame Number
EXT	TC1	TCO	
OFF	OFF	OFF	24 (Film)
OFF	OFF	ON	25 (EBU)
OFF	ON	OFF	29.97 (SMPTE DF)
OFF	ON	ON	30 (SMPTE NDF)
ON	ON or OFF	ON or OFF	Automatic switchover to one of the four above which is incoming from master machine.



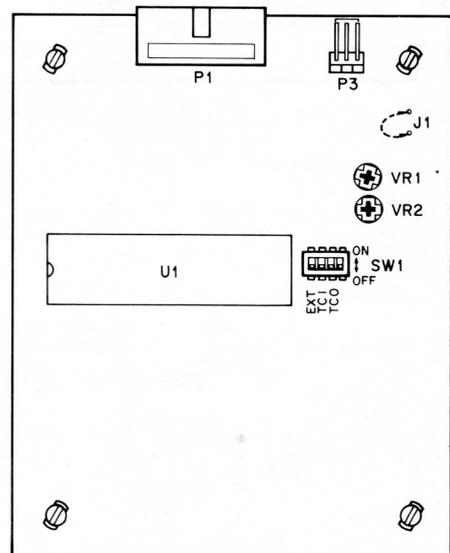
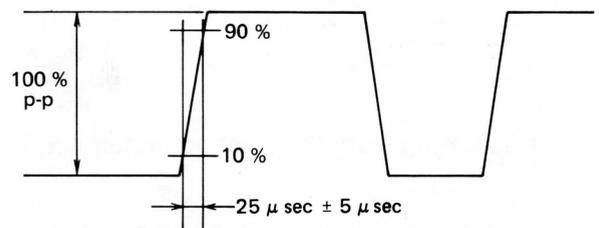
CAUTION: Even if SW1 is adjusted while the ES-50 is turned on, it has no effect unless the unit is once turned off and then turned on again.

A Word of Setting Advice: Setting the TC generator to its EXT position will be helpful when it should frequently be switched over (between DF and NDF or others). In EXT the TC generator is enabled to re-start the same timecode as the master.

Trimmer Adjustments

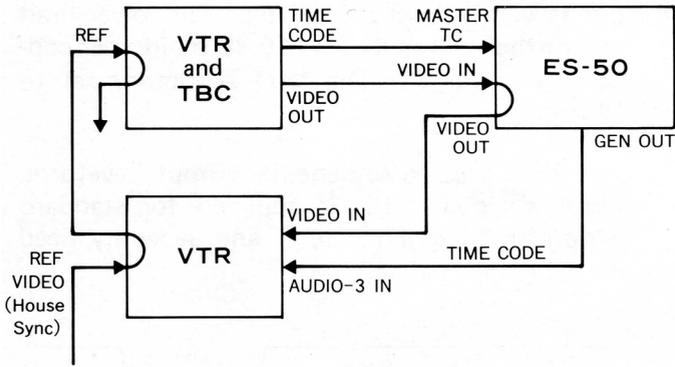
VR1 is used to adjust the TC generator output level within 0 to 17 Vp-p. The lower limit can further be reduced by 10 dB by jumper connecting points J1. The level is factory set to +4 dBm.

VR2 is used to reshape the output waveform. When shipped, VR2 is adjusted for standard waveform (diagram below) and generally need not be readjusted.



Interfacing Examples

1. Slaving the ES-50 to incoming LTC, to generate identical code.



CAUTION: Coexistence of conflicting Frame Standards on the master causes the ES-50's TC generator not to start functioning.

NOTE: Switchover of VTR from reproduce to record for enabling the ES-50's TC generator to start Extrapolating will be recorded as a "pinhole" in timecode which is, in the strict sense of the word, insignificant in operation level.

NOTE: When the ES-51's TIME DATA display switches to the ES-50's TC generator (see section 2-2-7 in the provided manual), the display may flicker from time to time, but this does not show any malfunctions of the TC generator.

2. Extrapolating from the existing master code.

