

25% pre-comp, receiver output

Green, .-.-. pattern is 101010101010101

RED, ____ pattern is 1111111011111110 No pre-comp

Solid Black , has pre-comp, same 111111101111110 pattern as above.

1st solid black signal is ~.5ns delay from 1st green dot-dash signal. Red dashed signal is 1 ns delayed



50% pre-comp, receiver output

Solid black signal is nearly identical to dot-dash green, so, from this you can see that for 50% pre-comp, no extra overdrive is needed.

Also, note the difference in delay between the 1st green dotdash and the 1st red dashed delay, about 1ns.



50% pre-comp, reciever input



25% pre-comp, receiver input, expanded view



33% pre-comp, receiver input



33% pre-comp, receiver output



Conclusions:

- 1) Only 80mV is needed for an eye opening with 50% pre-comp, the extra 70mV of overdrive from ultra160 isn't needed.
- 2) If you do less than 50% pre-comp you can prorate.
- 3) 33% pre-comp only needs 75% of 70mV or about 20mV of extra overdrive.
- 4) 25% pre-comp needs about 35mv of extra overdrive.
- 5) Therefore, since 35mV + 80mV = 115mV, is much less than 130mV, 130mV is fine for an eye opening.