Dear Dave,

Regarding your fax of Sept 22/97:

1) The jitter specifications for a modified unit would be as per our fax of Sept 22 (i.e. 70 ps at minimum delay and 700ps at maximum delay). The GEC-Marconi jitter measurements for the existing units do not agree with our own. At minimum delay, we measured ±150ps RMS jitter, not ±1.08ns. Measurements here suggest that jitter increases linearly with delay, which GEC-Marconi does observe between 5 and 28us delay. Between 1.5 and 5us it appears to be limited by the GEC-Marconi measuring system to around 0.75ns. We do acknowledge that the jitter is out of spec, however, we believe that it is substantially better than the GEC-Marconi measurements suggest at low delays.

2) The measured delay data supplied by GEC-Marconi indicates that the instrument is almost perfectly calibrated, contrary to the comments on your fax of September 19. (See the following table.) Only one data point, for the 20us delay, is out of calibration - it should be in the range of 19.6-20.4, but it is 19.58, only marginally outside this range. However, since all of the measured values are slightly below the nominal settings, this suggests that a slight adjustment of the calibration pots (as described in the manual) will easily bring all of the measured points into calibration.

Nominal Delay, µs	Lower Limit, Nominal -100ns-1.5%	Upper Limit, Nominal +100ns+1.5%	GEC-Marconi Measured Value	GEC-Marconi Value Within Range?	Values measured by Avtech prior to shipping, SN 8132
1.5	1.3775	1.6225	1.478	YES	1.499
2	1.87	2.13	1.913	YES	N/A
3	2.855	3.145	2.9	YES	N/A
4	3.84	4.16	3.877	YES	N/A
5	4.825	5.175	4.889	YES	4.934
10	9.75	10.25	9.85	YES	9.95
15	14.675	15.325	14.886	YES	15.03
20	19.6	20.4	19.58	NO	19.78
25	24.525	25.475	24.675	YES	24.93
28	27.48	28.52	27.752	YES	N/A

Regards,

Dr. Walter Chudobiak
Chief Engineer