

A NEW ACTIVE CATV SYSTEM ECHO TESTING TECHNOLOGY

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ABSTRACT ONLY

Various attempts have been made to quantify the transient or "echo" performance of CATV systems. Most of the testing done to date has dealt with the echo level tolerance following the limits devised by P. Mertz. Recent subjective tests by Bell Laboratories have shown that the Mertz's curve is too simplistic to define chrominance visual degradation since the Mertz subjective tests were conducted with monochrome sources.

The recent criteria require a CATV system testing technology beyond that developed to date. The author's firm has developed apparatus capable of highly refined CATV system echo testing, which when applied to existing systems and hardware, unveils new distortion factors not previously quantified in CATV systems.

The past measurement techniques and the recently developed measurement technology are discussed, together with samples of component and system measurements taken, consistent with the latest criteria.

The importance of these parameters are discussed especially as applied to high speed data signalling in cable systems such as are associated with vertical blanking interval data. It is also shown that these same distortions can degrade picture quality in CATV systems. Remedial procedures are discussed.