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AbstractCARRIER RECOVERY PROCESSOR
FOR A QAM TELEVISION SIGNAL

A television receiver responds to a quadrature amplitude modulated (QAM) signal containing symbols mapped into a four quadrant grid-like constellation defined by I and Q axes. Demodulated I and Q components are processed by a carrier recovery network which adjusts the parameters of a locally generated (12) carrier reference signal so as to maintain a desired orientation of the QAM constellation. The carrier recovery network includes a time multiplexed processor, including a signal multiplier (20), exhibiting plural operating modes in a digital phase locked loop (36-50) exhibiting a loop delay of one symbol period.

FIGURE 1

This Sheet Has Been Replaced