

[54] PSEUDORANDOM WORD SEQUENCE SYNCHRONIZER

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[57] ABSTRACT

A bit-error-rate tester provides for testing of links with different numbers of channels without replacing or reconfiguring an included pseudorandom word sequence (PRWS) generator. The tester includes a transmitter and a receiver, each with generators for parallel evenly staggered pseudorandom bit sequence (PRBS) replicas collectively constituting the PRWS. The receiver generator is a copy of the transmitter generator so that it can predict the PRWS received from the transmitter. Comparators are provided so that incoming and locally generating sequences can be compared to determine bit error rates. Synchronization of the receiver generator is effected using a pattern detector coupled to at least one reception line. When a predetermined pattern is detected, an injector injects registers of the receiver generator with a predetermined bit pattern. Afterwards, the receiver generator autonomously generates its PRWS synchronously with the PRWS received from the transmitting generator. A further embodiment provides for rerouting of crossed transmission channels as well as synchronization. In either case, there is no requirement that all available channels be active to effect synchronization.

5 Claims, 3 Drawing Sheets

