



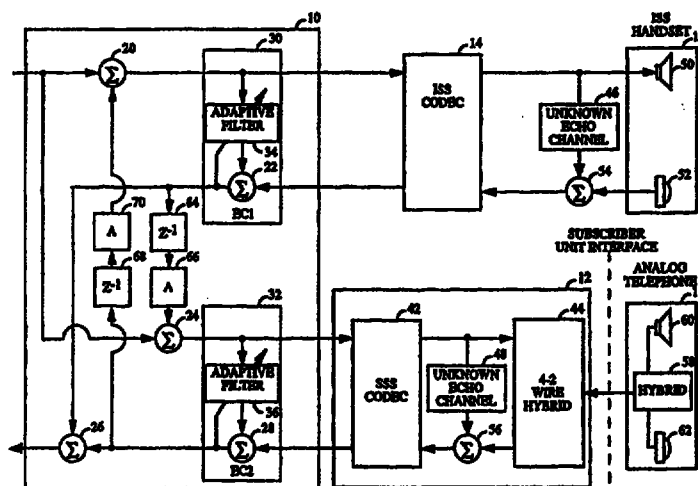
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(54) Title: MULTI-INPUT WIRELESS PHONE WITH ECHO SUPPRESSION



(57) Abstract

A method and apparatus for allowing two or more Wireless Local Loop telephone users to communicate simultaneously with each other and a far end user in which earsel and hybrid echo is reduced. The present invention operates within a Wireless Local Loop telephone having a plurality of telephone inputs, one of which is a dedicated handset (16) and at least one other input being a standard analog telephone (18, 20). Two echo cancellers (30, 32) are used within the phone to reduce the echo produced by the impedance mismatch of a 4-to-2 wire hybrid (44) and the dedicated handset (16). A first echo canceller (30) is optimized to remove the earsel echo generated at the dedicated handset (16) while a second echo canceller (32) is optimized to remove the hybrid echo generated at the 4-to-2 wire hybrid (44). The two echo cancellers operate independently such that neither echo canceller need adapt its filter coefficients when a change in the echo channel characteristics occurs, such as when a speaker hangs up or another speaker joins the conversation.