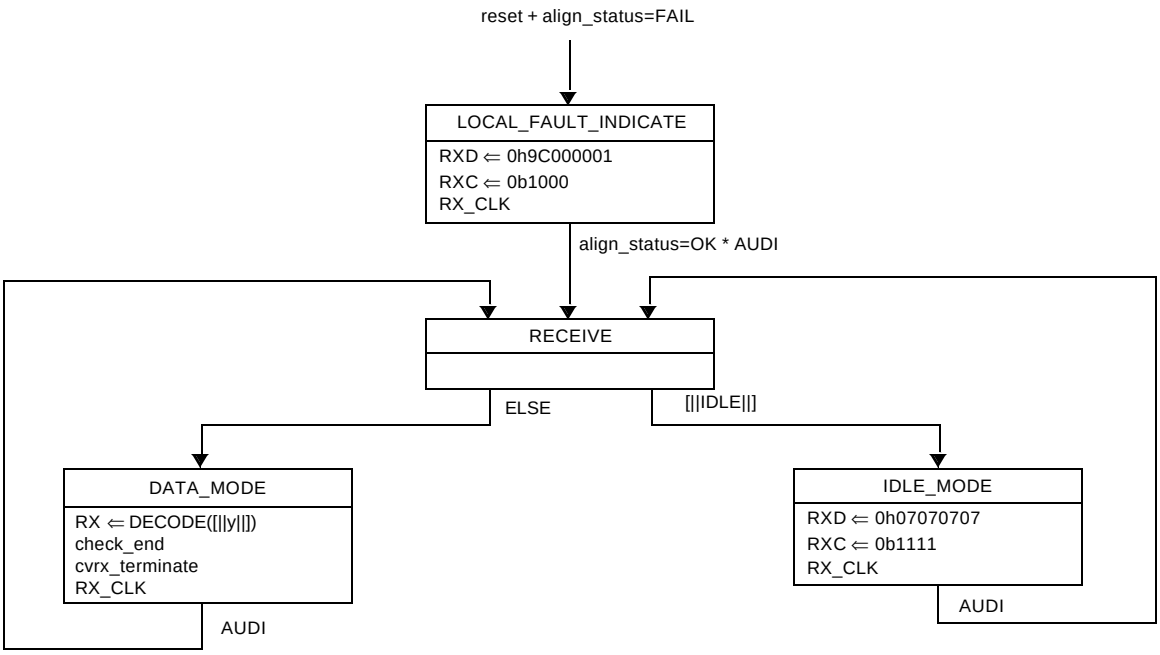

Figure 48–9—PCS receive state diagram

tus register link_status flag is set to OK whenever the align_status flag is set to OK and no errors preventing link operation are present in the PCS or PMA.

Editor's Note: *to be removed prior to final publication*
Need to define the correct Link_Status bits from MDIO/MDC

48.2.5.4 Link status reporting

Link status reporting involves detection of link status conditions and the signaling of link fault status. The purpose of link status reporting is to quickly identify and convey link status conditions to the RS which can take the necessary action to activate (deactivate) the link via the setting of the RS Link Status bit. Link status reporting and MAC packet transmission is mutually exclusive.

48.2.5.4.1 Link status detection

10GBASE-X link status conditions include signal and deskew status conditions. Link status conditions include local_fault and remote_fault conditions. A local_fault condition is recognized by the PCS Receive process whenever align_status=FAIL. Remote_fault conditions are not detected by the PCS or PMA and are detected only by the RS. A local_fault condition may also be recognized by any 10GBASE-X process upon detection of an error condition which prevents continued reliable operation, but that is beyond the scope of this standard.

48.2.5.4.2 Link status signaling

Link status signaling follows the detection or recognition of a link status condition and involves the generation of Sequence ordered-sets (||Q||) by the PCS Transmit process. Link status signaling involves the transmission of ||Q|| following ||A|| transmission in the Idle sequence as specified in 48.2.4.2.