61.0.0.0.1 Sync detection

The sync detection function serves two purposes. Firstly the syncronization shall be acquired from the incoming data stream, the sync detection function controls the initial acquisition and maintenance of the syncronization. Secondly, the sync detection is needed so that the receive control state machine can extract framing information from the ingress data stream and remove the sync characters and CRC codes. The sync detection state machine is shown in Figure 61–1 , .

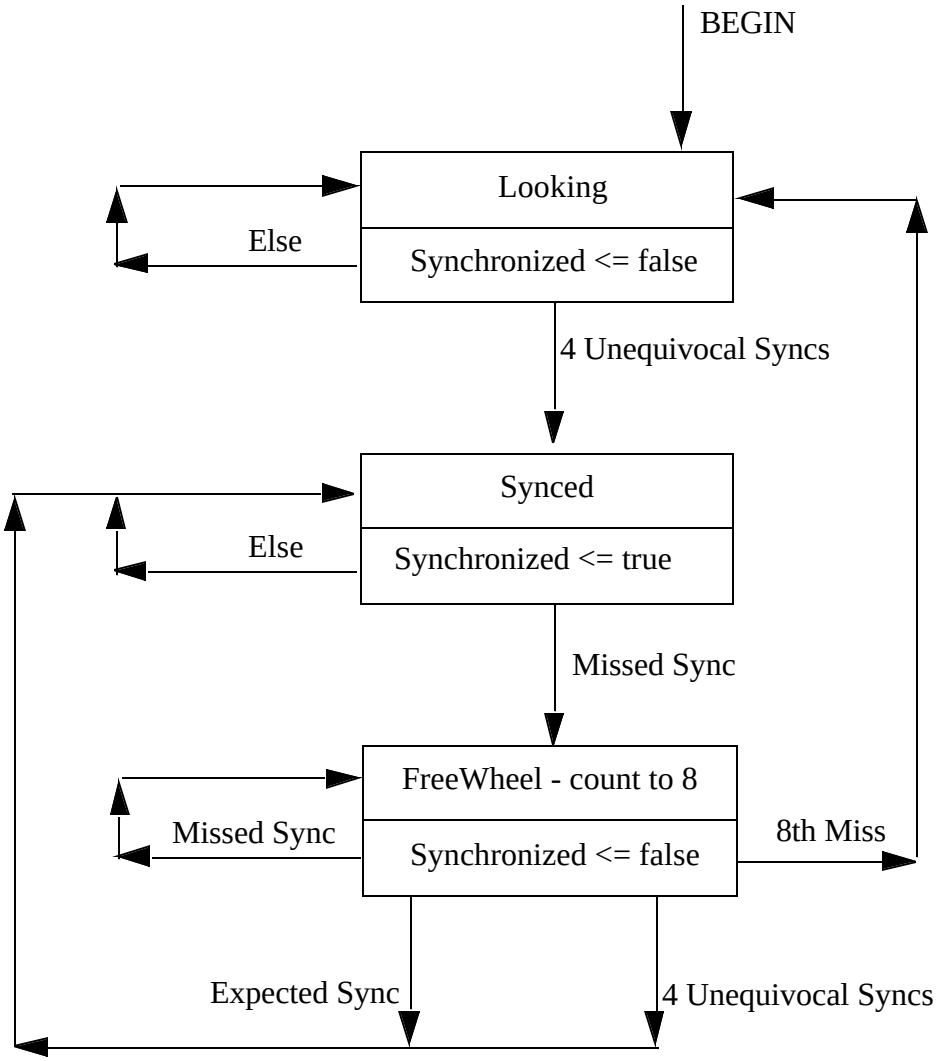

Figure 61–1—sync detect state machine

The definition of the state transition conditions is as follows:

a) 4 Unequivocal Syncs is defined as 4 consecutive syncs detected with no alternative sequence of more than 2 syncs during the same period.

b) Missed Sync is defined as a non-sync character in the byte stream position where a sync character is expected.

c) Expected Sync is defined as a sync character in the correct position in the byte stream

d) 8th Miss is defined as the 8th consecutive occurrence of a non-sync character in the byte stream where sync characters are expected.

61.0.0.0.2 Receive control

The receive control function removes the sync characters and encapsulation CRC bytes from the data stream before it is passed upward across the gamma interface. If Synchronized = false then signal RX_Err shall be asserted. If a CRC error is detected then the receive controller shall assert signal RX_Err during the last 4 bytes of the frame as it is passed up across the gamma interface.