



**Entry**  
 ST\_IDLE waits for data\_sent\_en. If send\_start\_delay is zero, the FSM skips ST\_DELAY.

**Pre-send scans**  
 ST\_BASE\_READ accumulates baseline\_sum[0:15].  
 ST\_HIT\_READ updates hit\_mask[15:0].

**Transmit**  
 ST\_SEND writes the header, hit\_mask, and full payload.  
 ST\_DONE clears busy, tcp\_wr, and rd\_en.