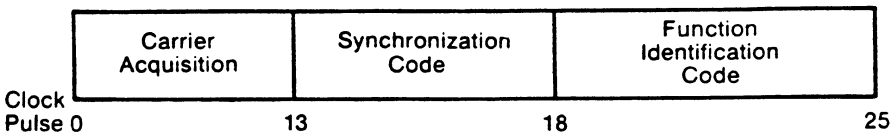

Figure 6 - Preamble organization.

(i) *Digital codes.* The coding used in the preamble for receiver synchronization is a Barker code logic 11101. The time of the last phase transition midpoint in the code shall be the receiver reference time (see Table 2). The function identification codes must be as shown in Table 3. The last two bits (I_{11} and I_{12}) of the code are parity bits obeying the equations:

$I_6 + I_7 + I_8 + I_9 + I_{10} + I_{11}$ = Even

$I_6 + I_8 + I_{10} + I_{12}$ = Even

(ii) *Data modulation.* The digital code portions of the preamble must be DPSK modulated in accordance with §171.311(c)(1) and must be transmitted throughout the function coverage volume.

(2) *Angle function formats.* The timing of the angle transmissions must be in accordance with Tables 4a, 4b, and 5. The actual timing of the TO and FRO scans must be as required to meet the accuracy requirements of §§171.313 and 171.317.

(i) Preamble. Must be in accordance with requirements of §171.311(i)(1).

TABLE 2—PREAMBLE TIMING [1]

Event	Event time slot begins at—	
	15.625 kHz clock pulse (number)	Time (milliseconds)
Carrier acquisition:		
(CW transmission)	0	0
Receiver reference time code:		
$I_1 = 1$	13	0.832
$I_2 = 1$	14	0.896
$I_3 = 1$	15	0.960
$I_4 = 0$	16	1.024
$I_5 = 1$	17	[2] 1.088
Function identification:		
I_6	18	1.152
I_7	19	1.216
I_8	20	1.280
I_9	21	1.344
I_{10} (see table 1)	22	1.408
I_{11}	23	1.472
I_{12}	24	1.536
END PREAMBLE	25	1.600

[1] Applies to all functions transmitted.
[2] Reference time for receiver synchronization for all function timing.

TABLE 3—FUNCTION IDENTIFICATION CODES

Function	Code						
	I_6	I_7	I_8	I_9	I_{10}	I_{11}	I_{12}
Approach azimuth	0	0	1	1	0	0	1
High rate approach azimuth	0	0	1	0	1	0	0
Approach elevation	1	1	0	0	0	0	1
Back azimuth	1	0	0	1	0	0	1
Basic data 1	0	1	0	1	0	0	0
Basic data 2	0	1	1	1	1	0	0
Basic data 3	1	0	1	0	0	0	0
Basic data 4	1	0	0	0	1	0	0
Basic data 5	1	1	0	1	1	0	0
Dasic data 6	0	0	0	1	1	0	1
Auxiliary data A	1	1	1	0	0	1	0
Auxiliary data B	1	0	1	0	1	1	1
Auxiliary data C	1	1	1	1	0	0	0

(ii) *Sector signals.* In all azimuth formats, sector signals must be transmitted to provide Morse Code identification, airborne antenna selection, and system test signals. These signals are not required in the elevation formats. In addition, if the signal from an installed ground component results in a valid indication in an area where no valid guidance should exist, OCI signals must be radiated as provided for in the signal format (see Tables 4a, 4b, and 5). The sector signals are defined as follows:

(A) *Morse Code.* DPSK transmissions that will permit Morse Code facility identification in the aircraft by a four letter code starting with the letter ''M'' must be included in all azimuth functions. They must be transmitted and repeated at approximately equal intervals, not less than six times per