

FIG.1

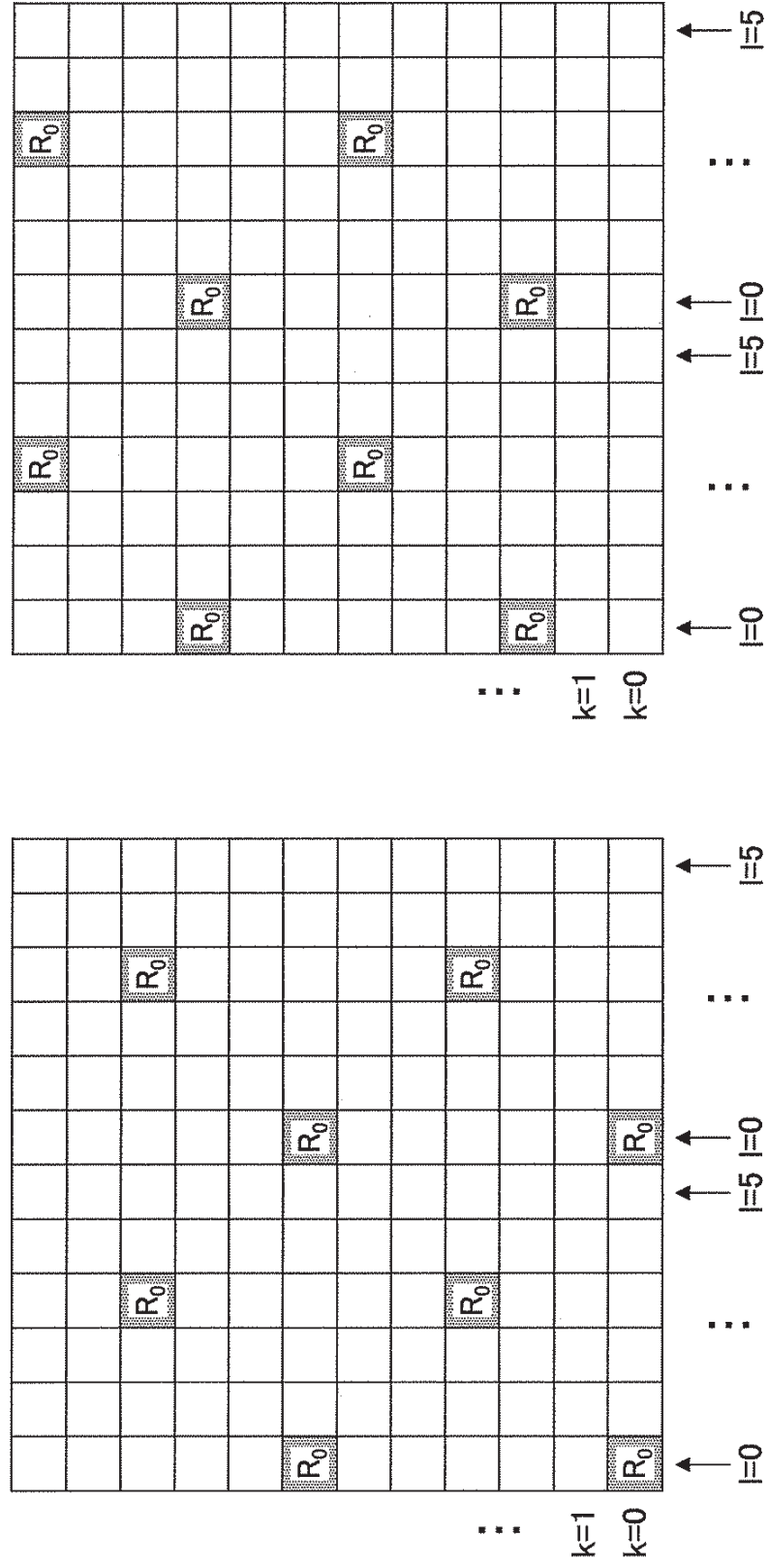
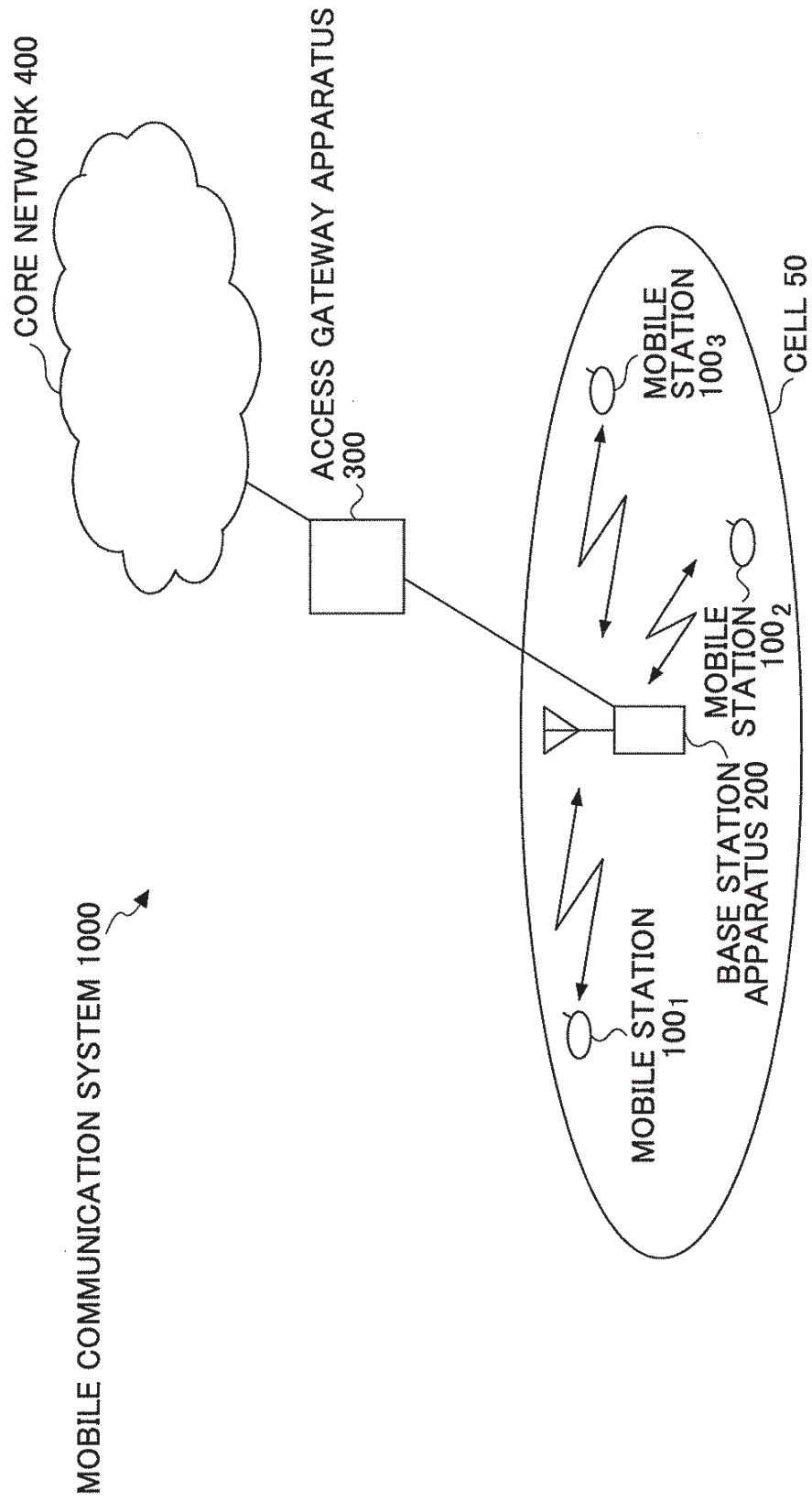


FIG.2



MOBILE COMMUNICATION SYSTEM 1000

# FIG.3

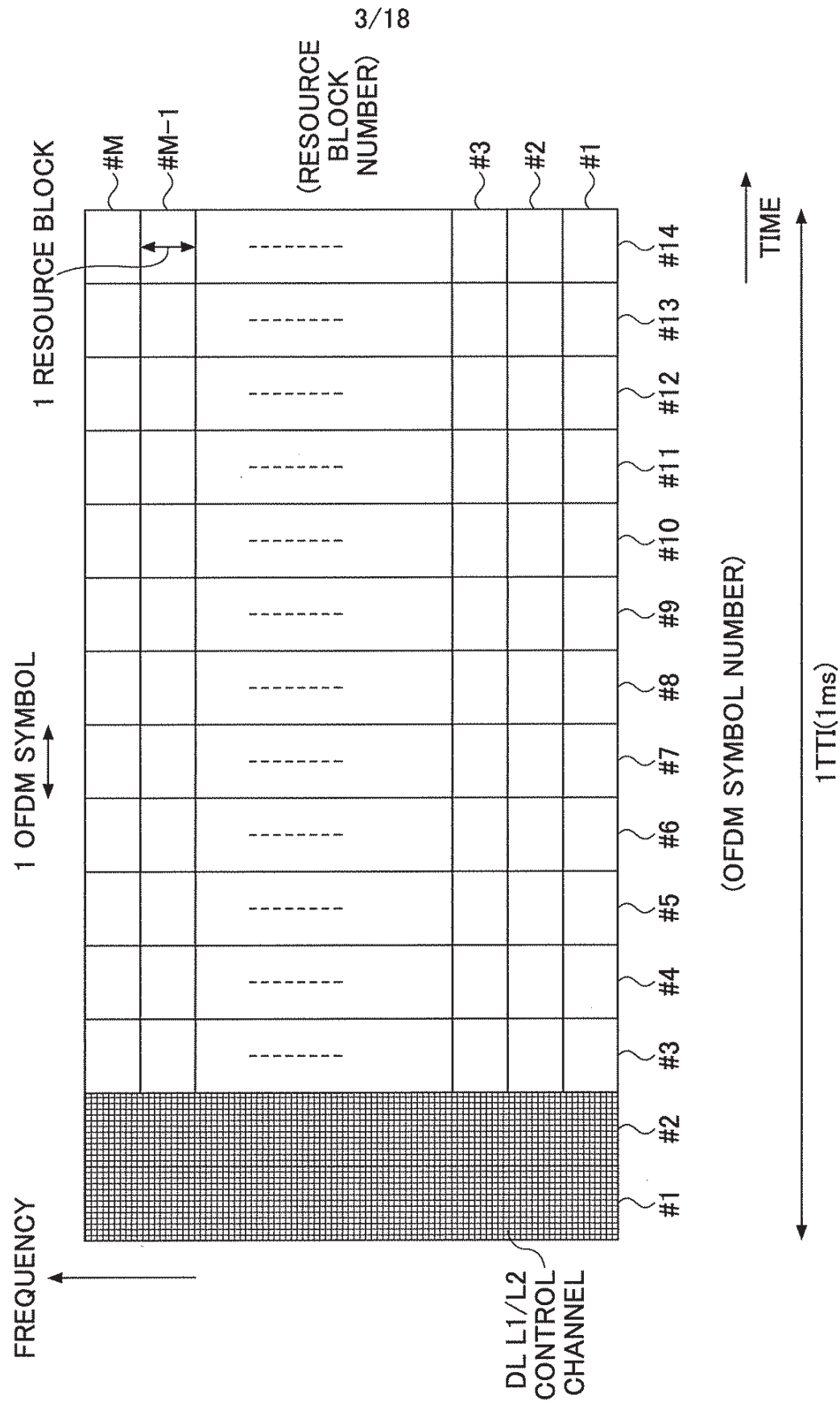


FIG.4

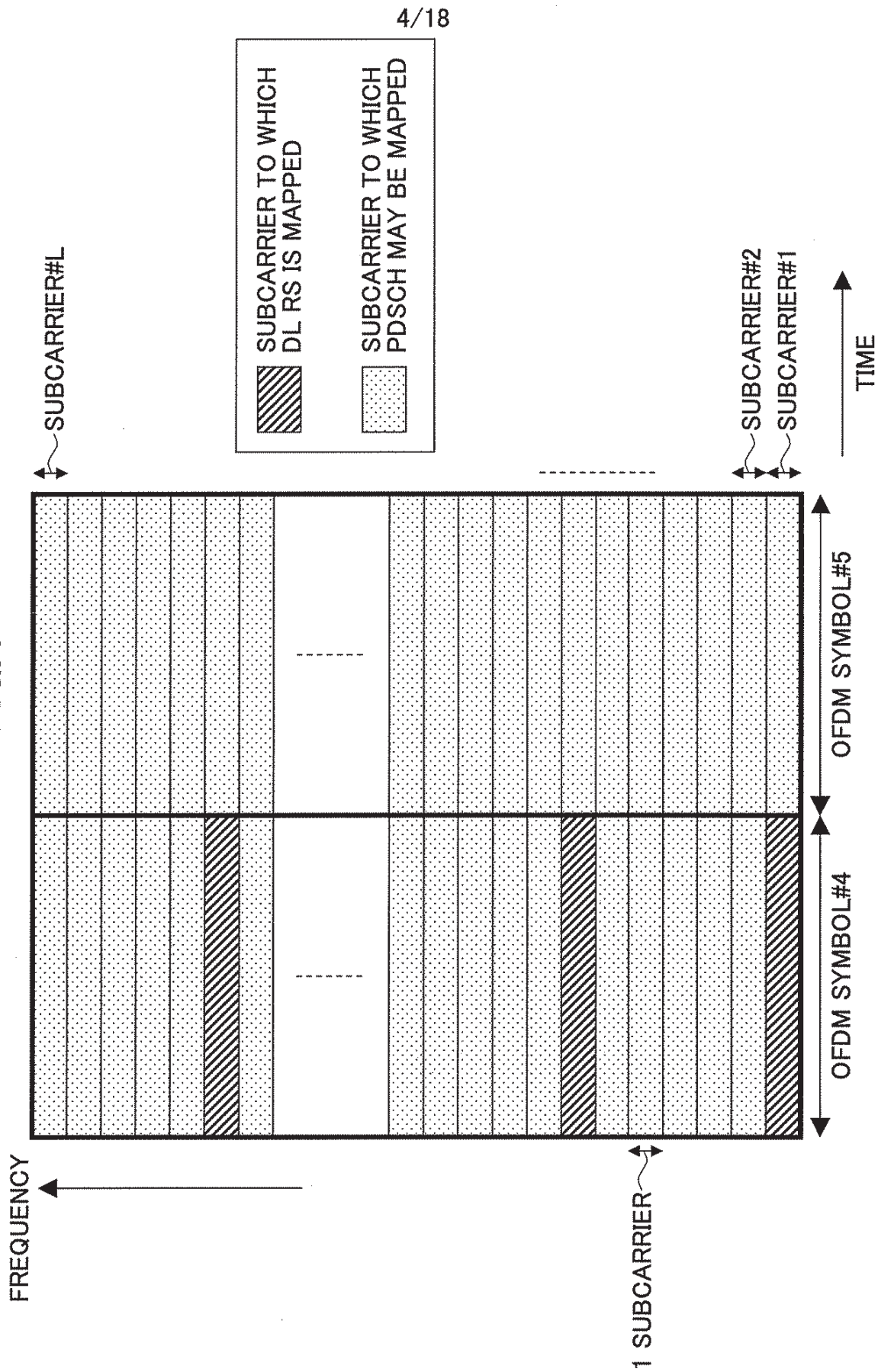


FIG.5

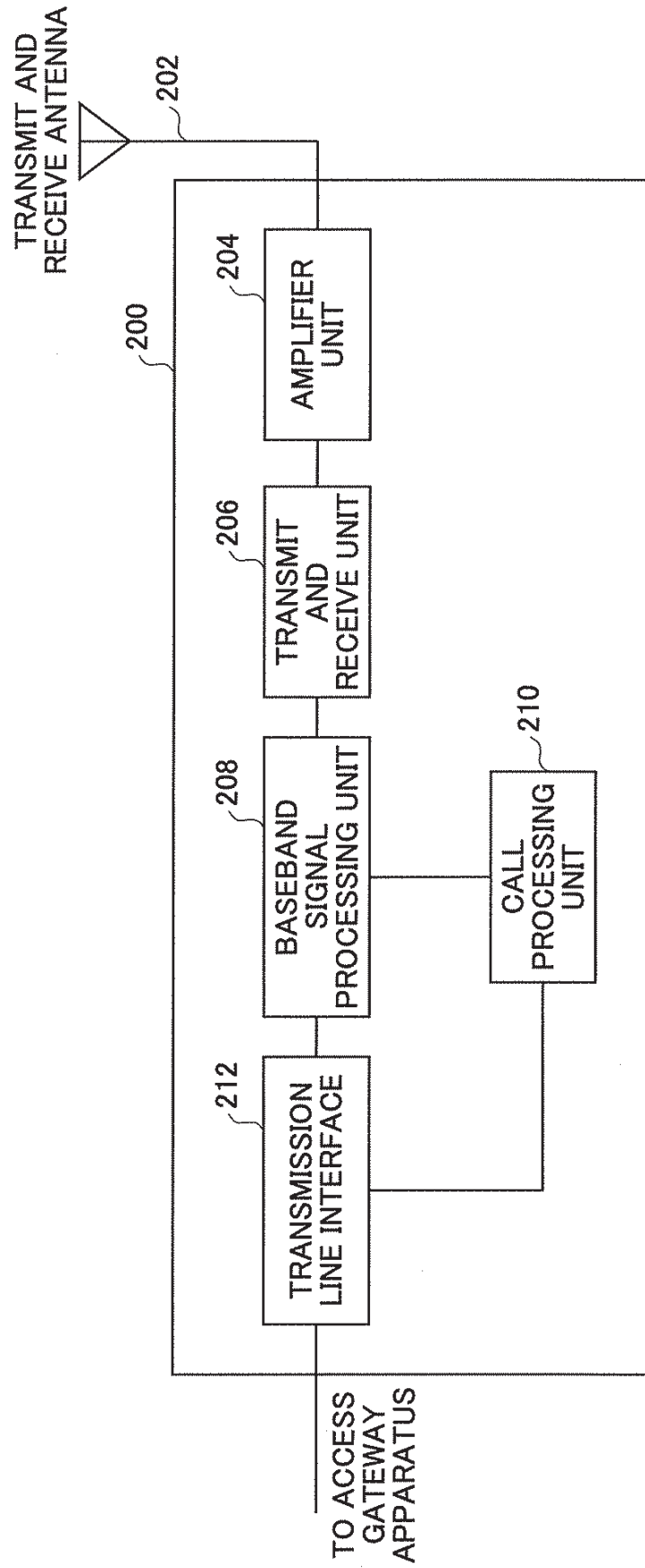


FIG.6A

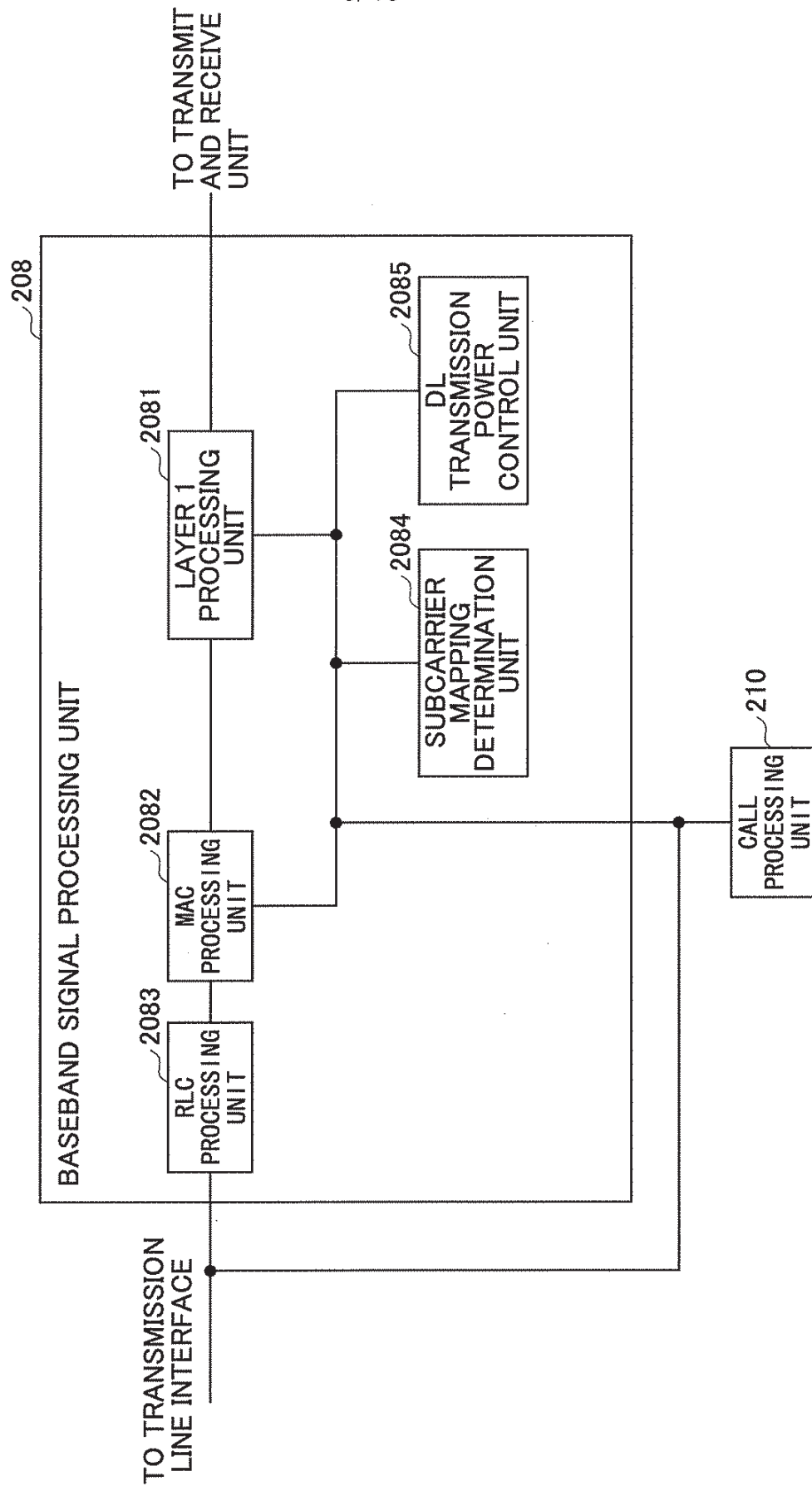


FIG. 6B

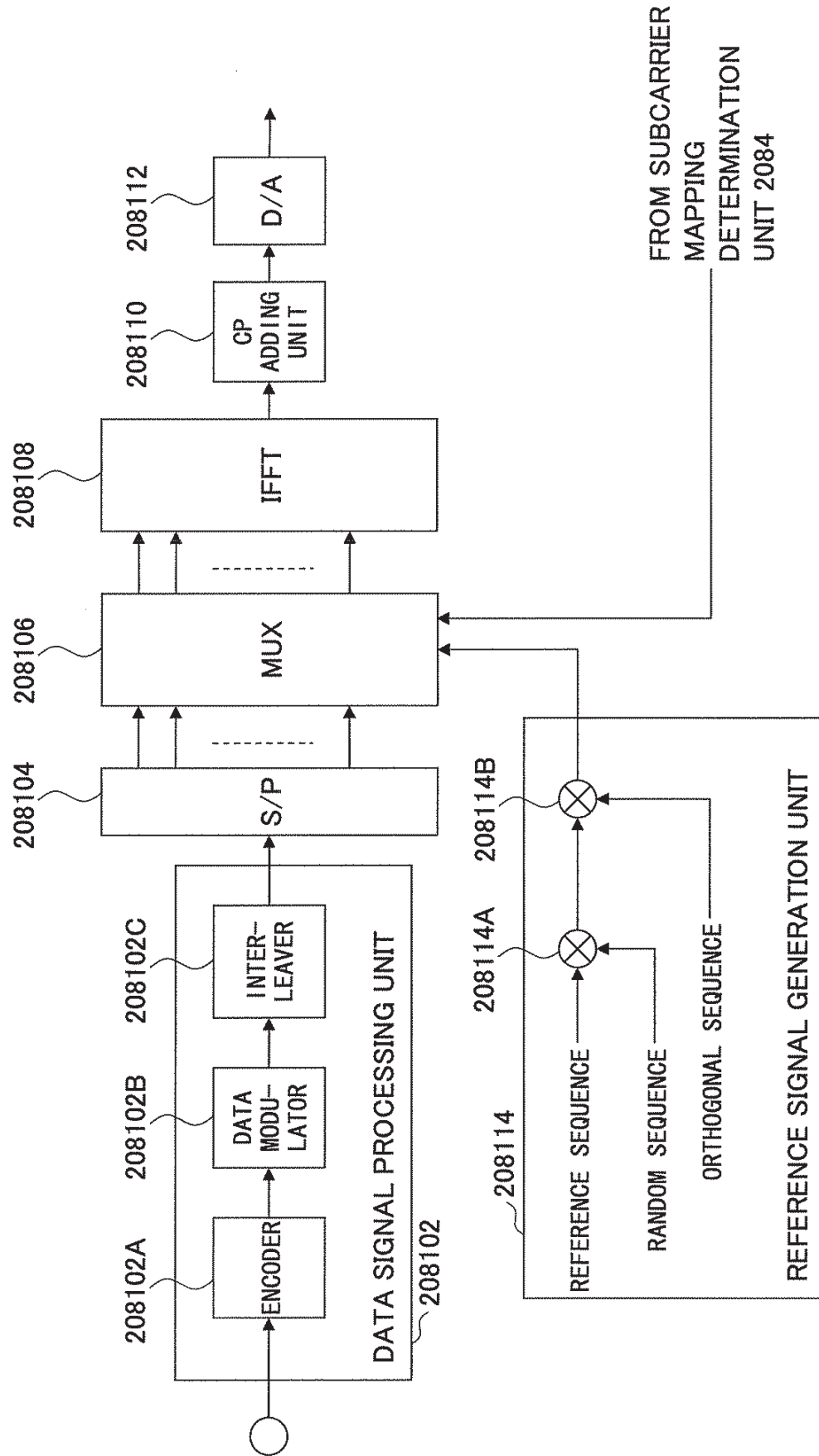


FIG. 7

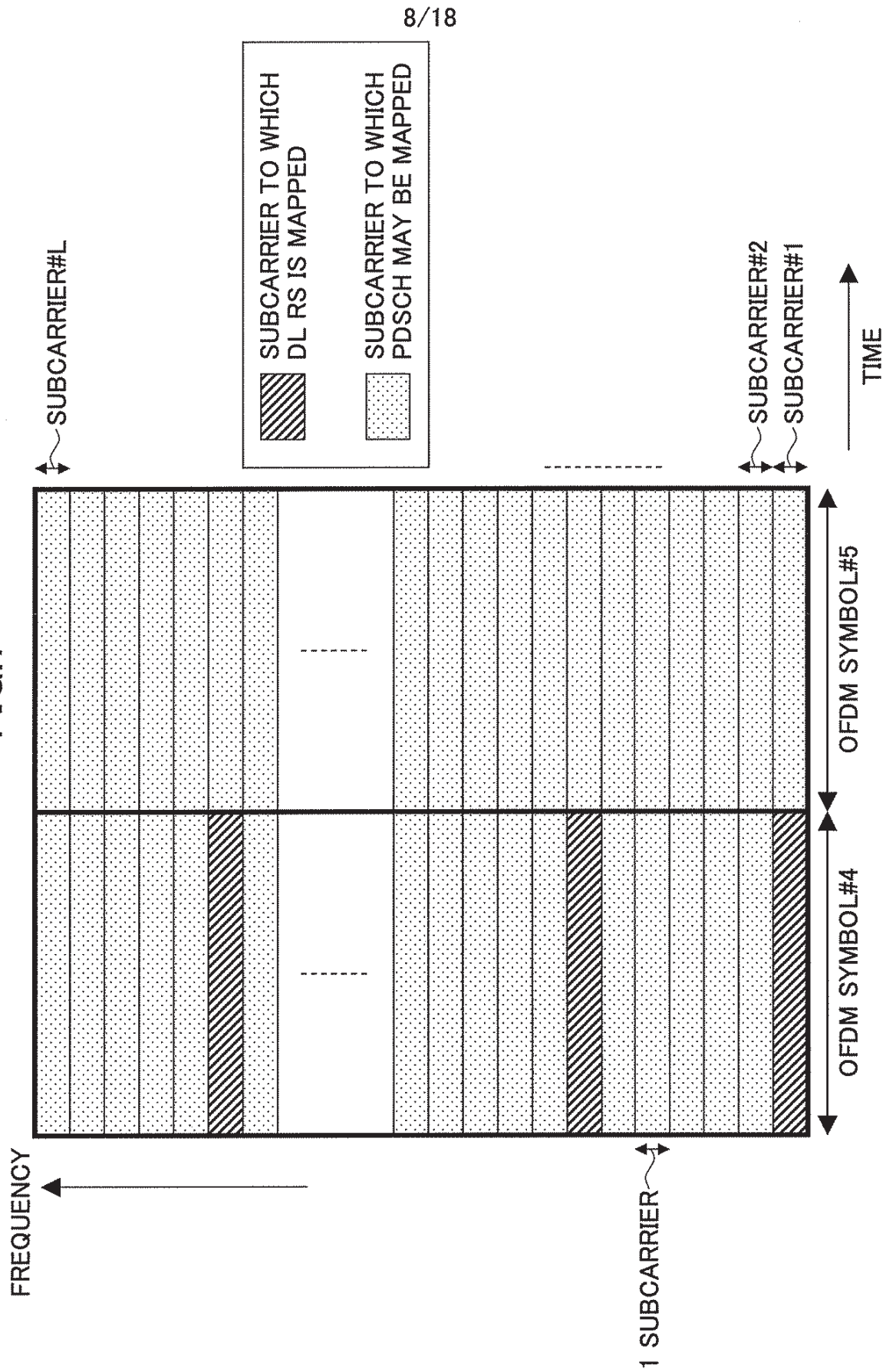


FIG.8

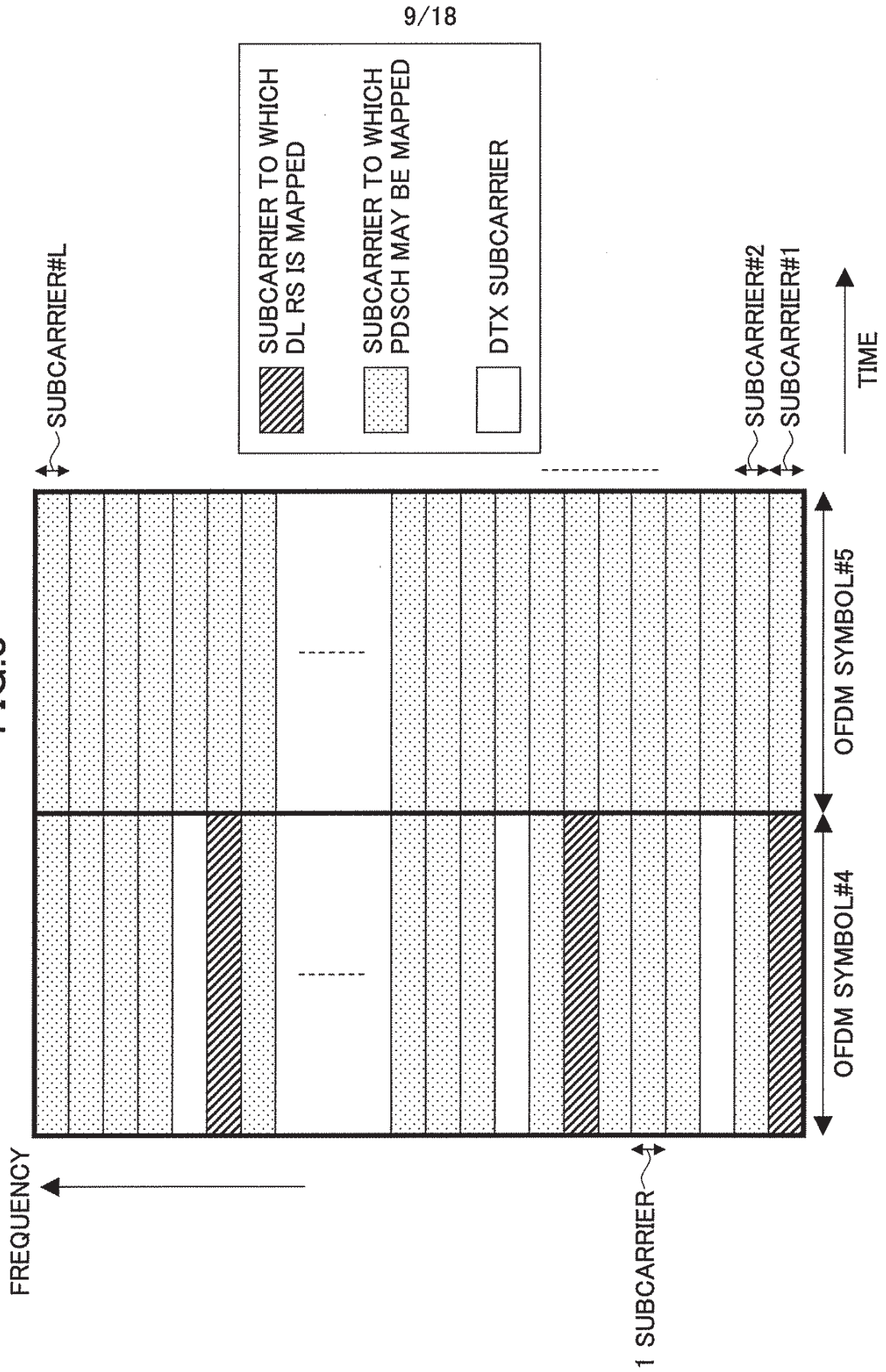


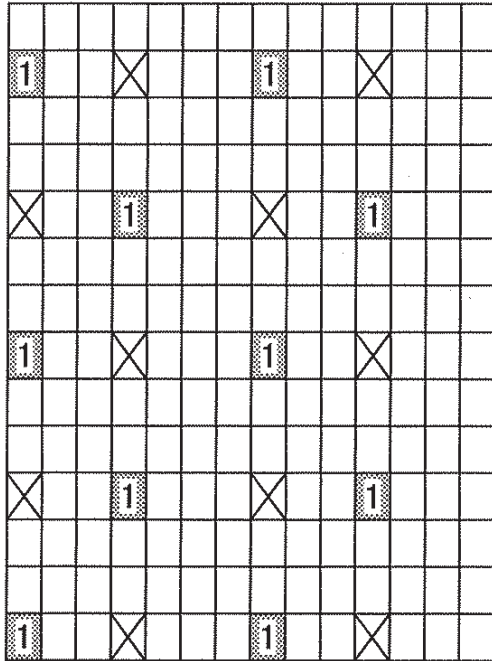
FIG.9A

| NUMBER OF PUNCTURING<br>SUBCARRIERS<br>PER 1 RESOURCE BLOCK | PUNCTURING SUBCARRIER NUMBER                                                                      |
|-------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| 1                                                           | $(X+1) \bmod 12$                                                                                  |
| 2                                                           | $(X+1) \bmod 12, (X+7) \bmod 12$                                                                  |
| 3                                                           | $(X+1) \bmod 12, (X+5) \bmod 12, (X+9) \bmod 12$                                                  |
| 4                                                           | $(X+1) \bmod 12, (X+4) \bmod 12, (X+7) \bmod 12, (X+10) \bmod 12$                                 |
| 5                                                           | $(X+1) \bmod 12, (X+3) \bmod 12, (X+5) \bmod 12, (X+7) \bmod 12, (X+9) \bmod 12$                  |
| 6                                                           | $(X+1) \bmod 12, (X+3) \bmod 12, (X+5) \bmod 12, (X+7) \bmod 12, (X+9) \bmod 12, (X+11) \bmod 12$ |

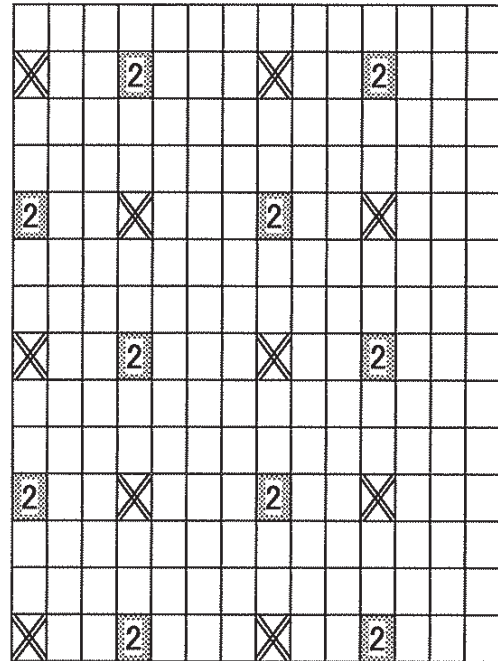
FIG.9B

| NUMBER OF PUNCTURING<br>SUBCARRIERS PER 1 RESOURCE BLOCK | PUNCTURING SUBCARRIER NUMBER                                                    |
|----------------------------------------------------------|---------------------------------------------------------------------------------|
| 1                                                        | $(X+3) \bmod 12$                                                                |
| 2                                                        | $(X+3) \bmod 12, (X+9) \bmod 12$                                                |
| 3                                                        | $(X+3) \bmod 12, (X+9) \bmod 12, (X+1) \bmod 12$                                |
| 4                                                        | $(X+3) \bmod 12, (X+9) \bmod 12, (X+1) \bmod 12, (X+7) \bmod 12$                |
| 5                                                        | $(X+3) \bmod 12, (X+9) \bmod 12, (X+1) \bmod 12, (X+7) \bmod 12, (X+5)$         |
| 6                                                        | $(X+3) \bmod 12, (X+9) \bmod 12, (X+1) \bmod 12, (X+7) \bmod 12, (X+5), (X+11)$ |

FIG.9C



WHEN ANTENNA PORT NUMBER  
IS 0 AND  $f_{\text{hop}}(j)$  IS ALWAYS 0



WHEN ANTENNA PORT NUMBER  
IS 1 AND  $f_{\text{hop}}(j)$  IS ALWAYS 0

- 1** SUBCARRIER OF REFERENCE SIGNAL TRANSMITTED FROM FIRST ANTENNA
- X** SUBCARRIER BY WHICH NO SIGNAL IS TRANSMITTED FROM FIRST ANTENNA SINCE THE SUBCARRIER OVERLAPS WITH SUBCARRIER OF REFERENCE SIGNAL TRANSMITTED FROM SECOND ANTENNA
- 2** SUBCARRIER OF REFERENCE SIGNAL TRANSMITTED FROM SECOND ANTENNA
- X** SUBCARRIER BY WHICH NO SIGNAL IS TRANSMITTED FROM SECOND ANTENNA SINCE THE SUBCARRIER OVERLAPS WITH SUBCARRIER OF REFERENCE SIGNAL TRANSMITTED FROM FIRST ANTENNA



FIG. 11

[illegible]



**FIG.12B**

| NUMBER OF PUNCTURING<br>SUBCARRIERS IN EACH RB | TRANSMISSION POWER VALUE<br>(OFFSET VALUE) OF DL RS<br>(DOWNLINK REFERENCE SIGNAL) |
|------------------------------------------------|------------------------------------------------------------------------------------|
| 0                                              | 0.00 dB                                                                            |
| 1                                              | 1.76 dB                                                                            |
| 2                                              | 3.01 dB                                                                            |
| 3                                              | 3.97 dB                                                                            |
| 4                                              | 4.77 dB                                                                            |
| 5                                              | 5.44 dB                                                                            |
| 6                                              | 6.02 dB                                                                            |

FIG.13A

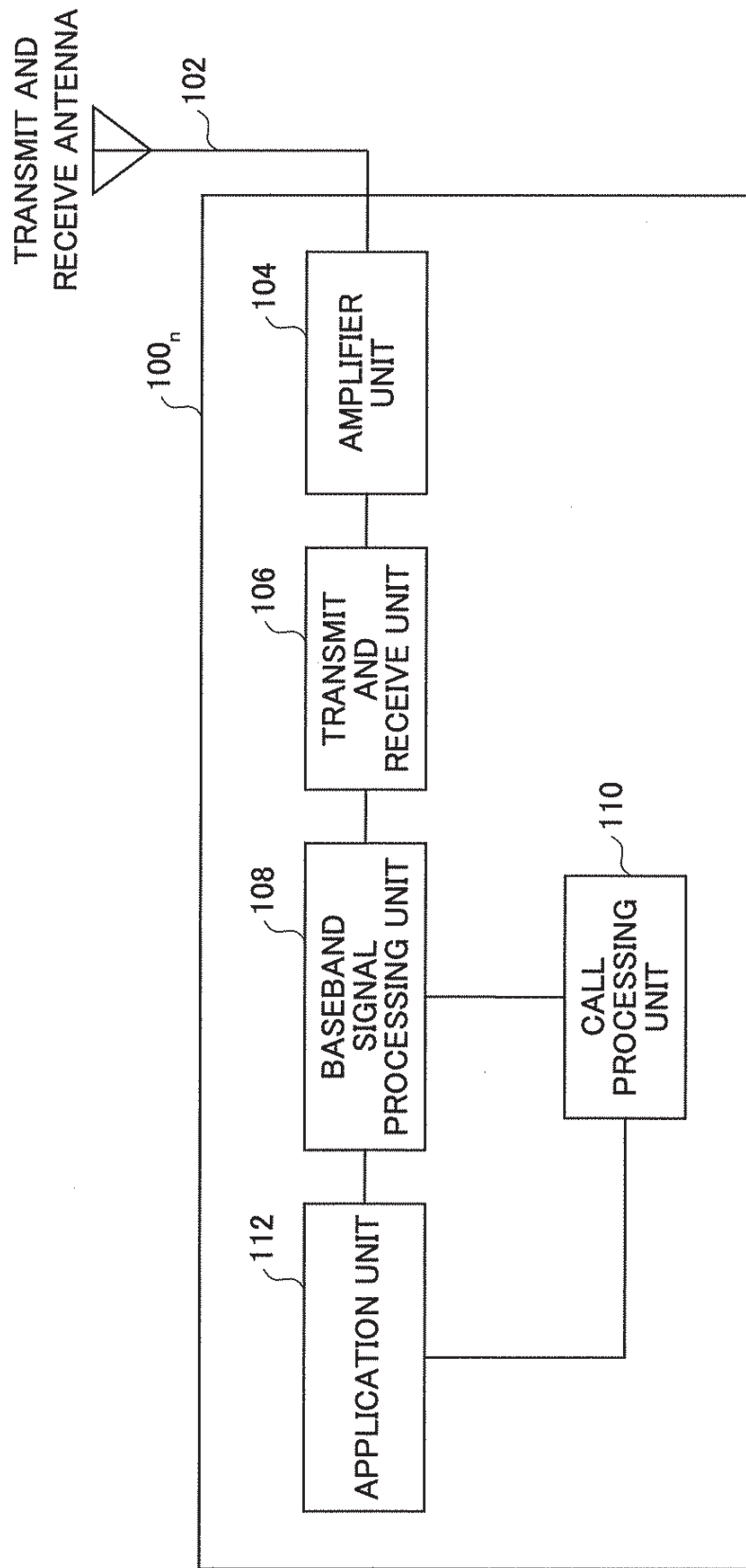


FIG.13B

