FIG. 1

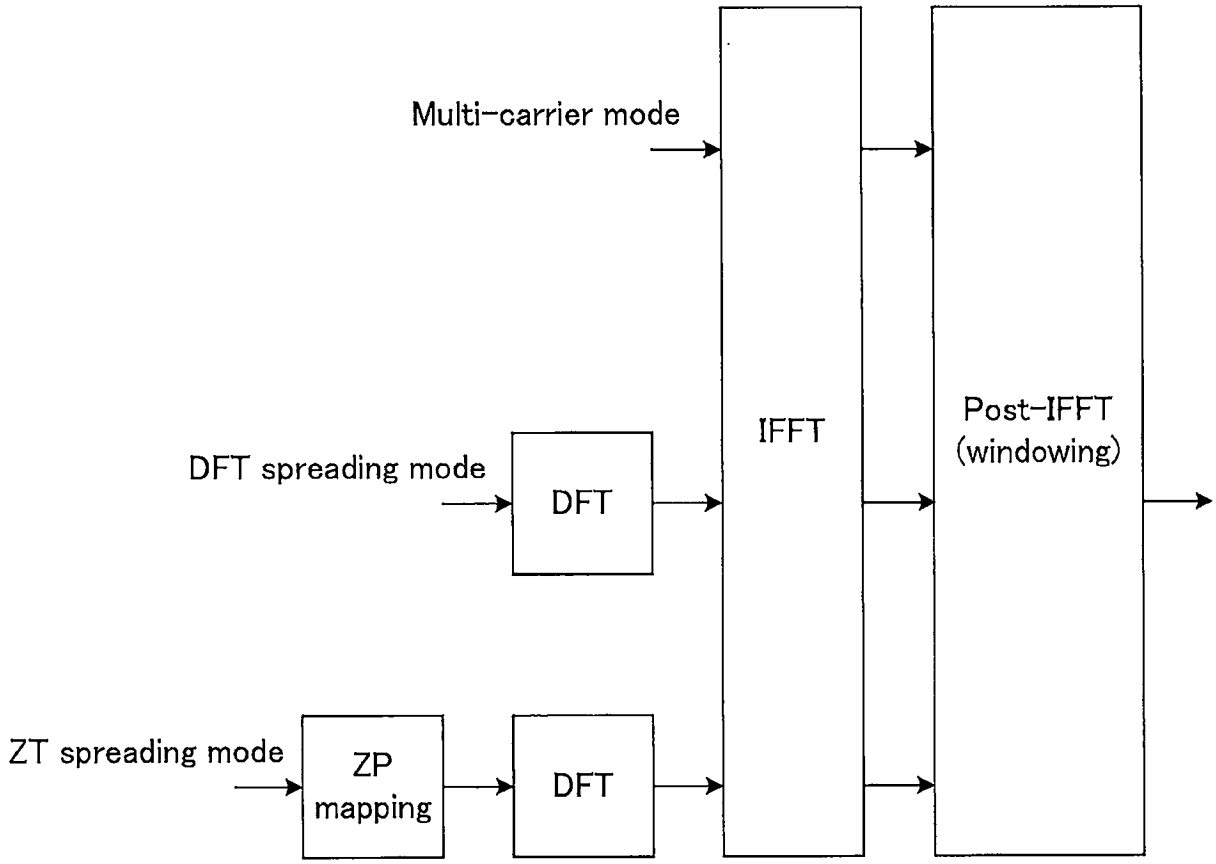

Multi-carrier mode
DFT spreading mode
DFT
ZT spreading mode
ZP mapping
DFT
IFFT
Post-IFFT (windowing)

FIG. 2

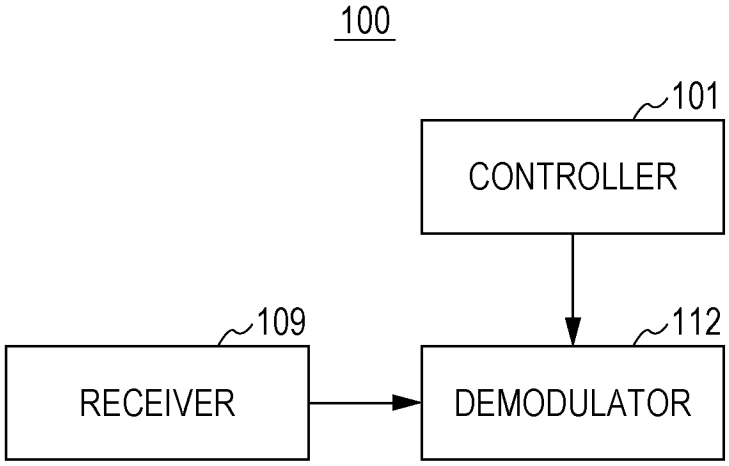

100
101
CONTROLLER
109
112
RECEIVER
DEMODULATOR

FIG. 3

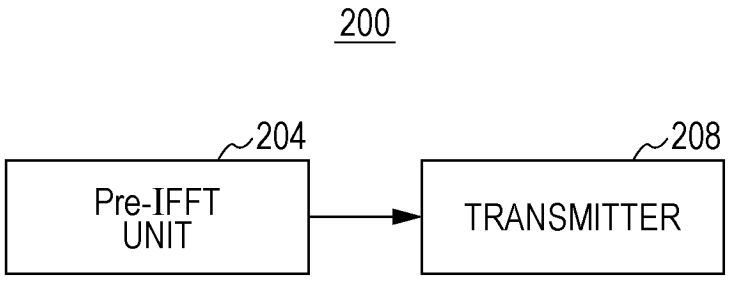

200
204
208
Pre-IFFT UNIT
TRANSMITTER

FIG. 4

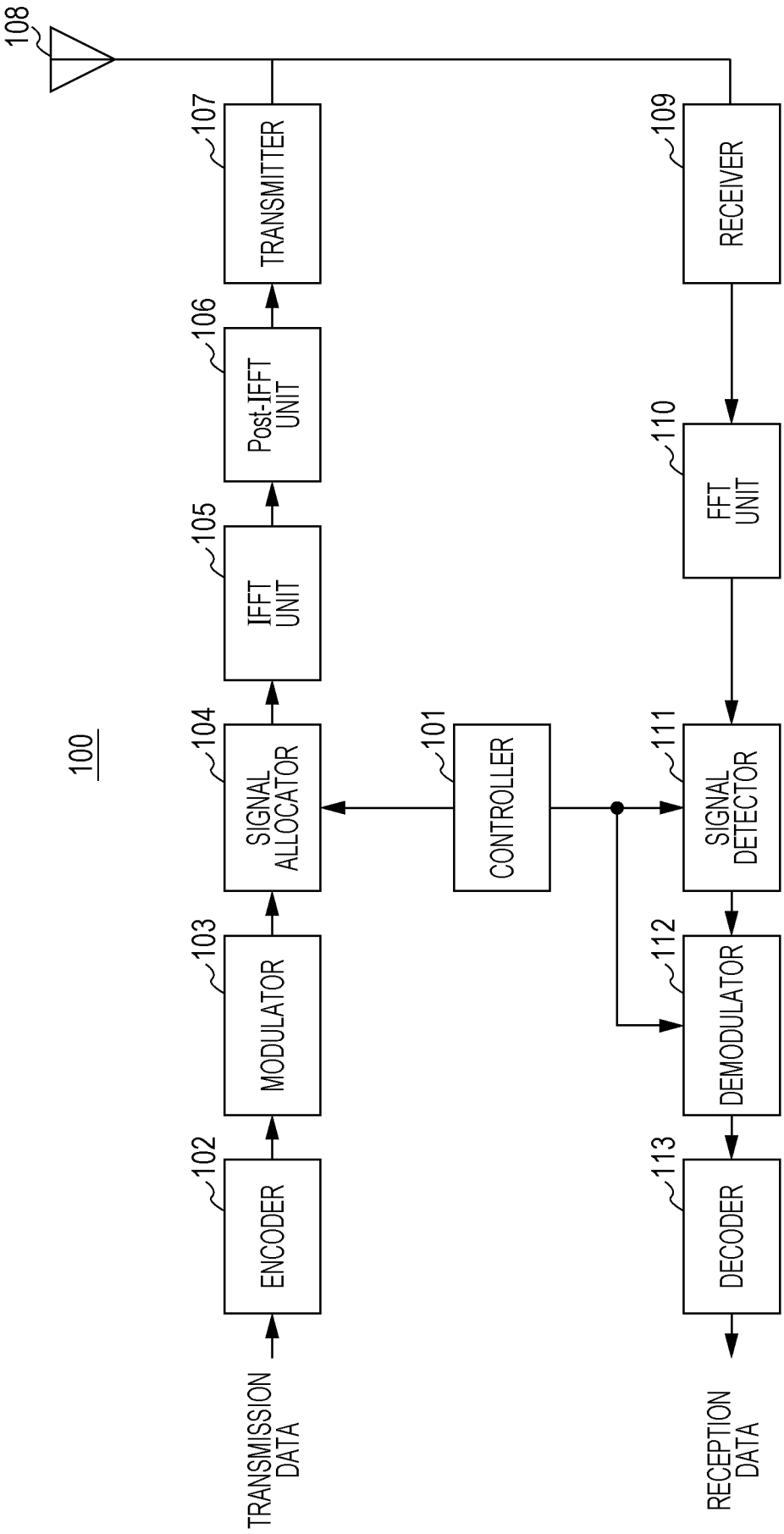
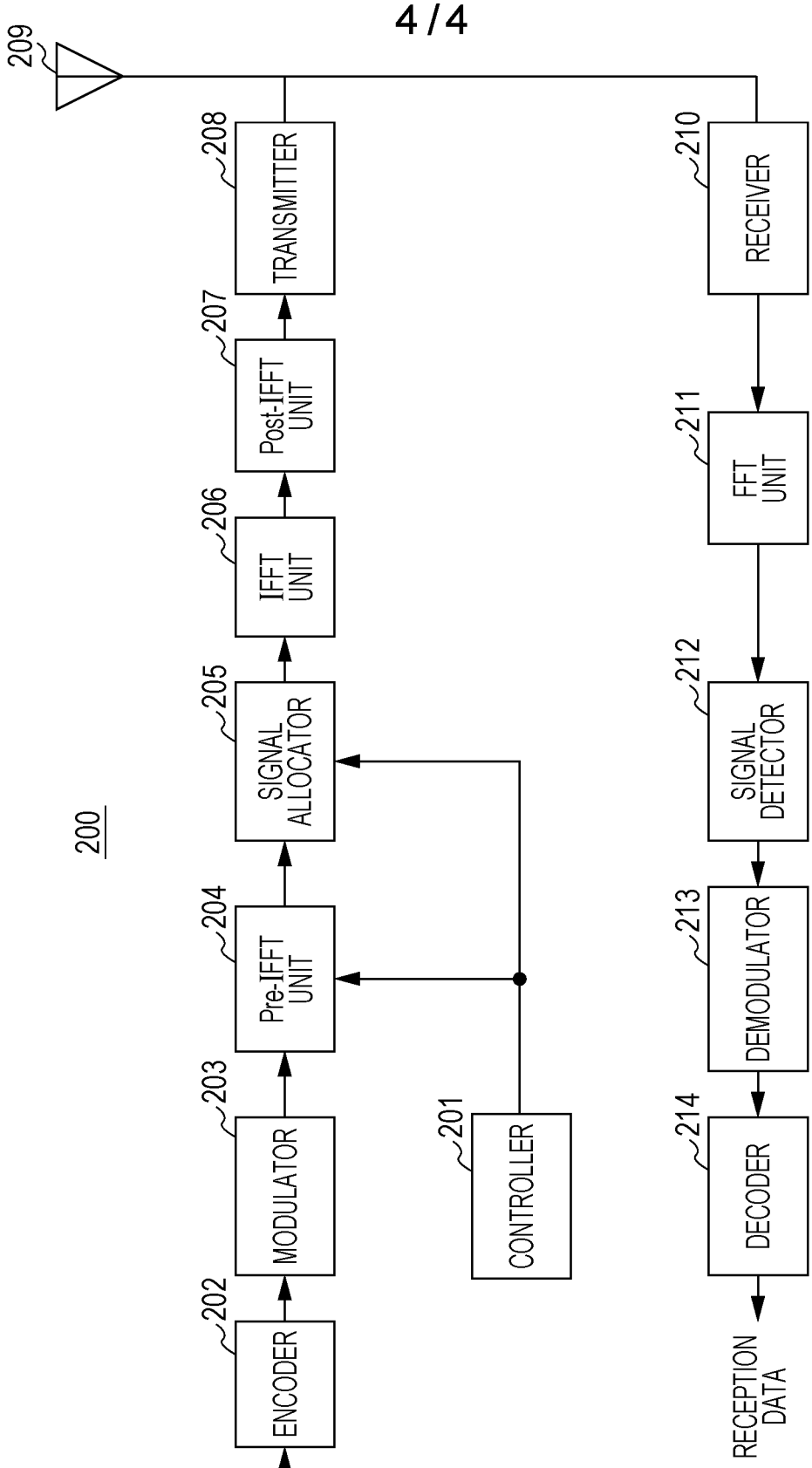

100
108
107
TRANSMITTER
106
Post-IFFT UNIT
105
IFFT UNIT
104
SIGNAL ALLOCATOR
103
MODULATOR
102
ENCODER
TRANSMISSION DATA
101
CONTROLLER
109
RECEIVER
110
FFT UNIT
111
SIGNAL DETECTOR
112
DEMODULATOR
113
DECODER
RECEPTION DATA

FIG. 5


200
209
TRANSMISSION DATA
ENCODER
202
MODULATOR
203
Pre-IFFT UNIT
204
SIGNAL ALLOCATOR
205
IFFT UNIT
206
Post-IFFT UNIT
207
TRANSMITTER
208
CONTROLLER
201
RECEIVER
210
FFT UNIT
211
SIGNAL DETECTOR
212
DEMODULATOR
213
DECODER
214
RECEPTION DATA