

ABSTRACTRECEIVER, TRANSMITTER, COMMUNICATION SYSTEM,
AND METHOD OF COMMUNICATION

A receiver, comprising a plurality of antennas configured to receive signals that are obtained by multiplying a plurality of data symbols transmitted over a plurality of data channels using spreading codes for each of the data channels, the data symbol being transmitted over a plurality of sub-carriers having different frequencies; a spreading code multiplier configured to multiply reception signals received by the plurality of antennas using spreading codes for the data channels corresponding to the reception signals; a weight controller configured to adjust antenna weights by which a reception signal received by each antenna is to be multiplied, and sub-carrier weights by which a reception signal received over each sub-carrier is to be multiplied; a weight multiplier configured to multiply the reception signals by the antenna weights and the sub-carrier weights adjusted by the weight controller; and a combining unit configured to combine the reception signals multiplied by the antenna weights and the sub-carrier weights at the weight multiplier among the antennas and over spreading code duration of the spreading codes.

(Figure 19)

