200204073-1 (03/07/02)

162162

ACTION

Abstract

Receiver and Method for WLAN Burst type Signals

The present invention relates to methods and devices for receiving signals in a Wireless Local Area Network (wireless LAN, or WLAN), particularly in the case that the signals are Orthogonal Frequency Division Multiplexed (OFDM) signals. An Automatic Gain Control apparatus for an OFDM receiver is disclosed, having means for determining the average power of received preamble symbols in order to set an appropriate AGC level, means for determining a first AGC level based on the average power of a first number of symbols and means for determining a second AGC level based on the average power of a second number of subsequent symbols.

Fig. 4

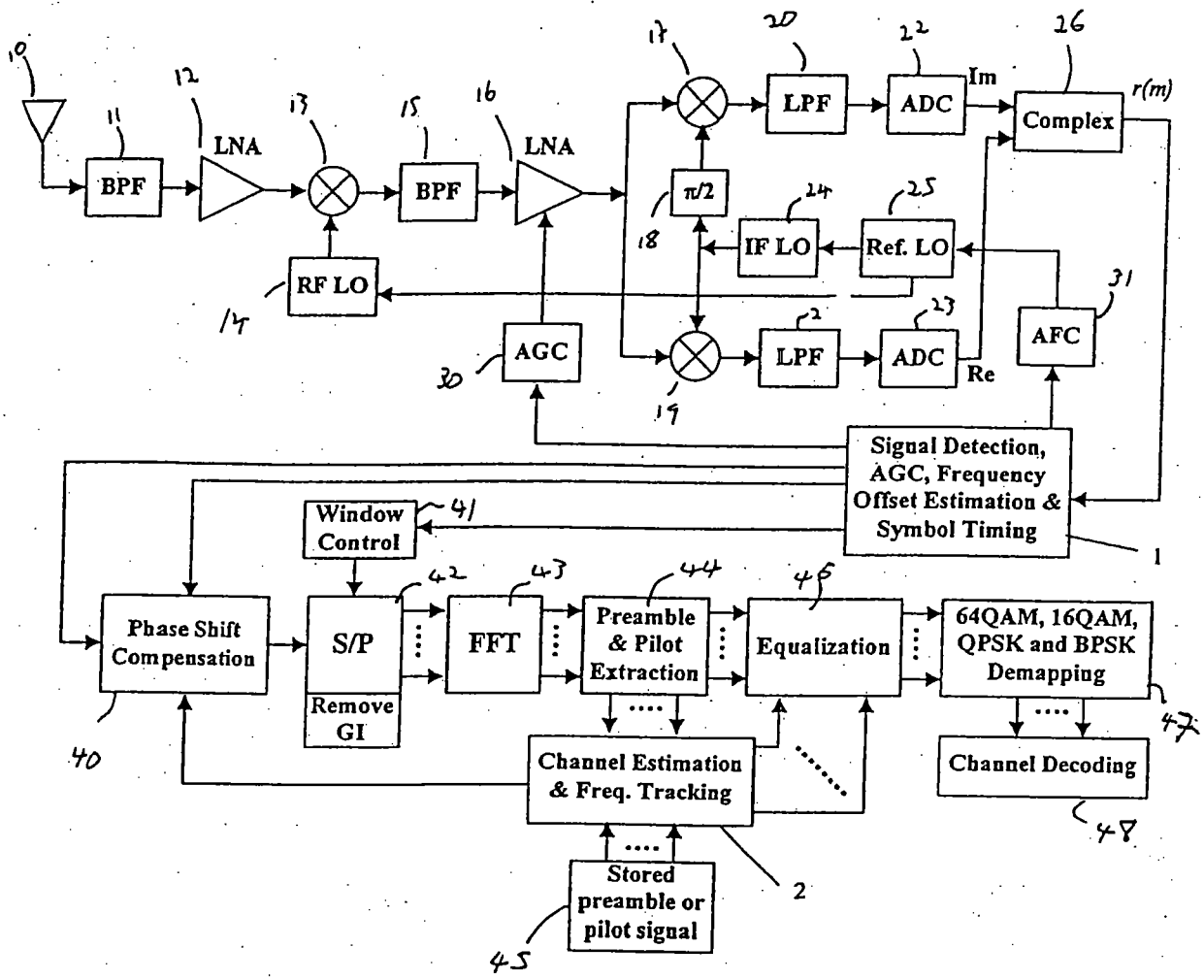

10
11
BPF
12
LNA
13
15
BPF
16
LNA
17
20
LPF
22
ADC
Im
26
Complex
r(m)
π/2
18
24
IF LO
25
Ref. LO
RF LO
14
AGC
30
LPF
23
ADC
Re
31
AFC
19
Signal Detection, AGC, Frequency Offset Estimation & Symbol Timing
1
Window Control
41
Phase Shift Compensation
40
S/P
Remove GI
42
FFT
43
Preamble & Pilot Extraction
44
Equalization
46
64QAM, 16QAM, QPSK and BPSK Demapping
47
Channel Estimation & Freq. Tracking
2
Channel Decoding
48
Stored preamble or pilot signal
45

Figure 4