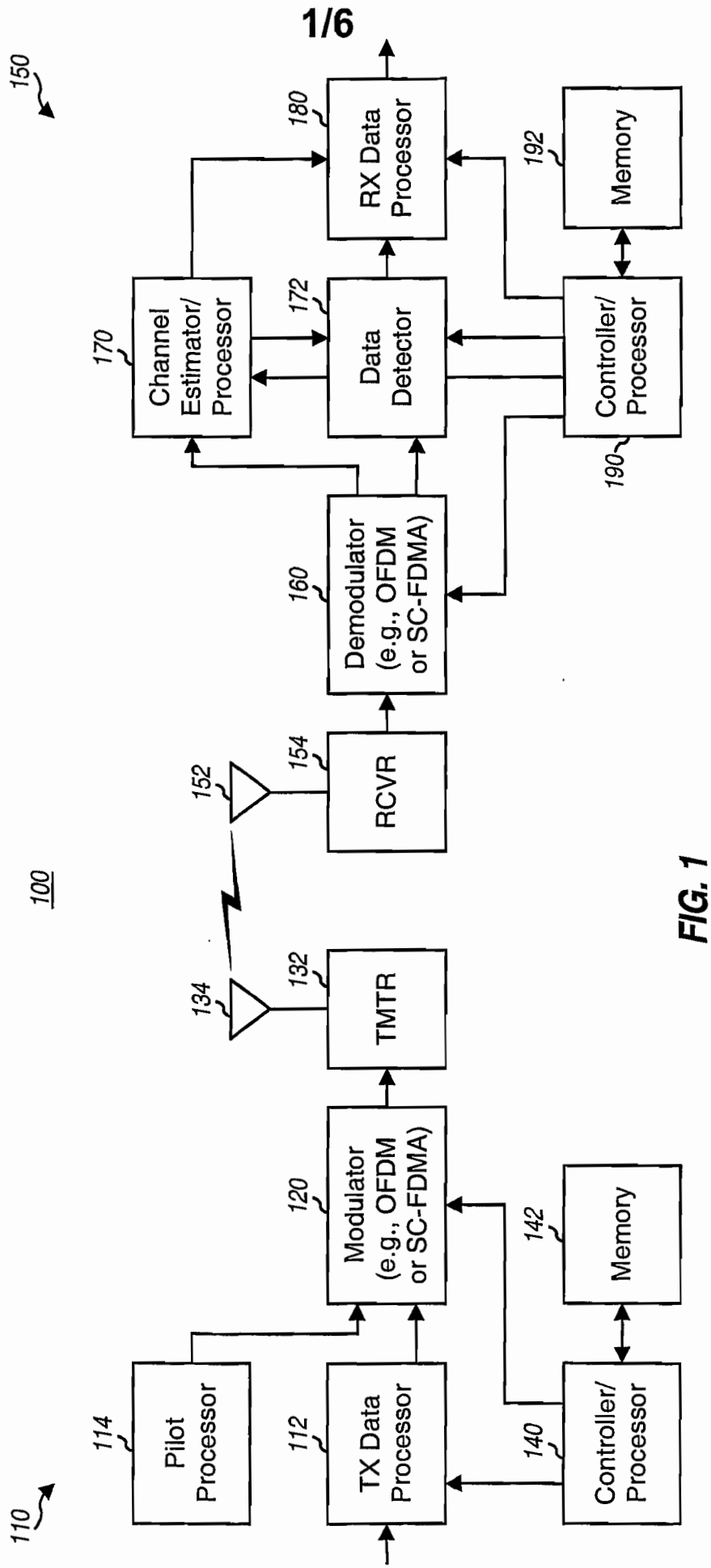

100
110
150
Pilot Processor
114
TX Data Processor
112
Modulator (e.g., OFDM or SC-FDMA)
120
TMTR
132
134
152
RCVR
154
Demodulator (e.g., OFDM or SC-FDMA)
160
Channel Estimator/ Processor
170
Data Detector
172
RX Data Processor
180
Controller/ Processor
190
Memory
192
Controller/ Processor
140
Memory
142

FIG. 1

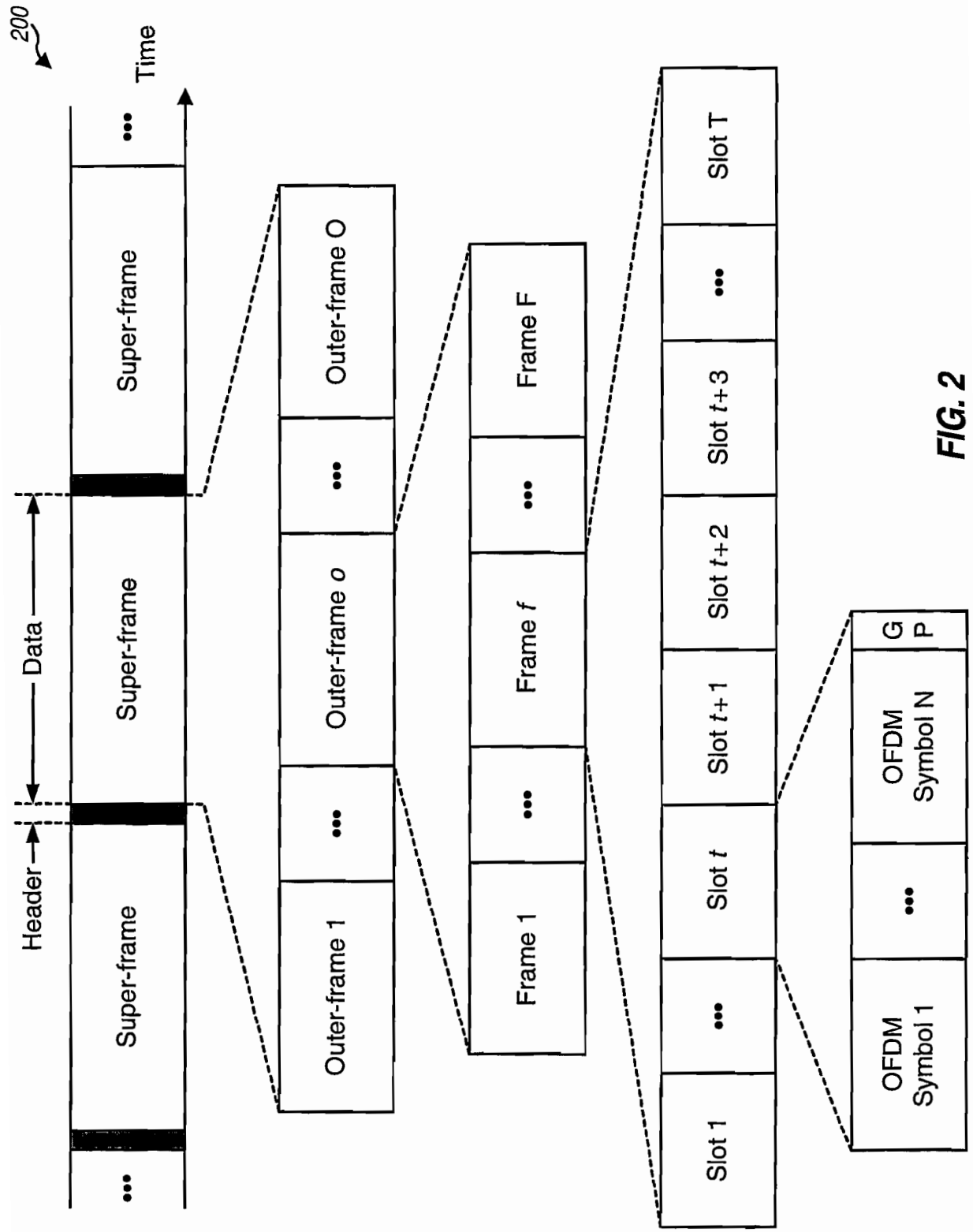

200
Time
Header
Data
Super-frame
Super-frame
Super-frame
Outer-frame 1
Outer-frame o
Outer-frame O
Frame 1
Frame f
Frame F
Slot 1
Slot t
Slot t+1
Slot t+2
Slot t+3
Slot T
OFDM Symbol 1
OFDM Symbol N
GP

FIG. 2

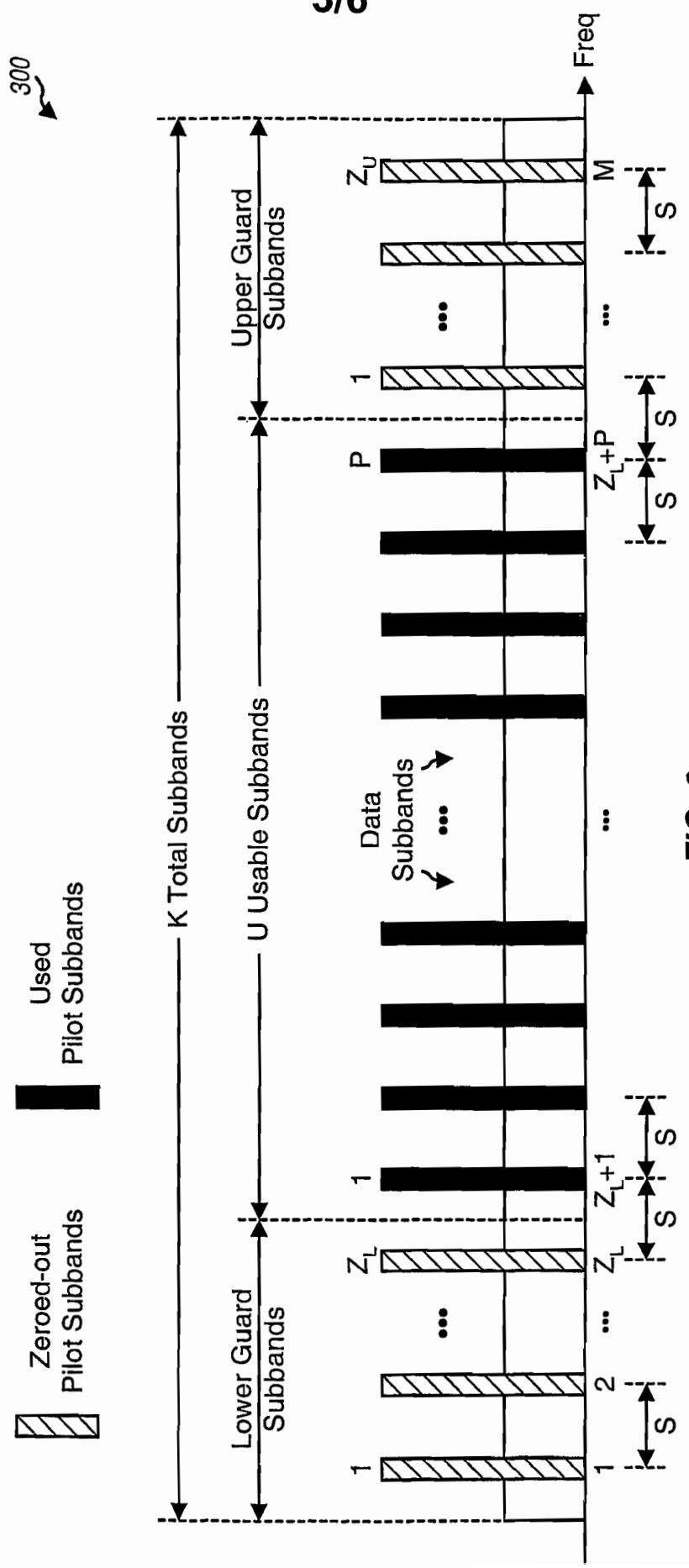

300
Freq
K Total Subbands
U Usable Subbands
Upper Guard Subbands
Lower Guard Subbands
Data Subbands
Used Pilot Subbands
Zeroed-out Pilot Subbands
Z_U
M
Z_L+P
P
1
Z_L+1
Z_L
2
S

FIG. 3

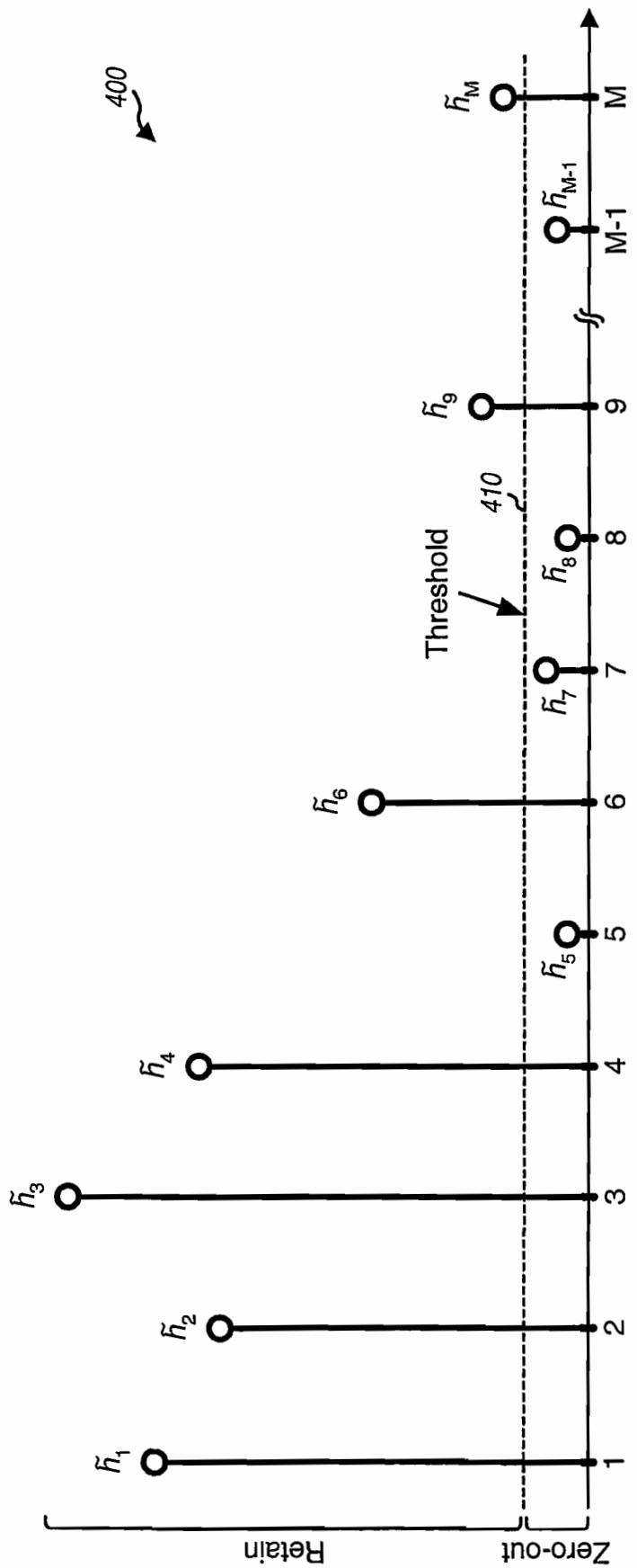

400
410
Threshold
Retain
Zero-out
Tap Index
1
2
3
4
5
6
7
8
9
M-1
M
$\tilde{h}_1$
$\tilde{h}_2$
$\tilde{h}_3$
$\tilde{h}_4$
$\tilde{h}_5$
$\tilde{h}_6$
$\tilde{h}_7$
$\tilde{h}_8$
$\tilde{h}_9$
$\tilde{h}_{M-1}$
$\tilde{h}_M$

FIG. 4

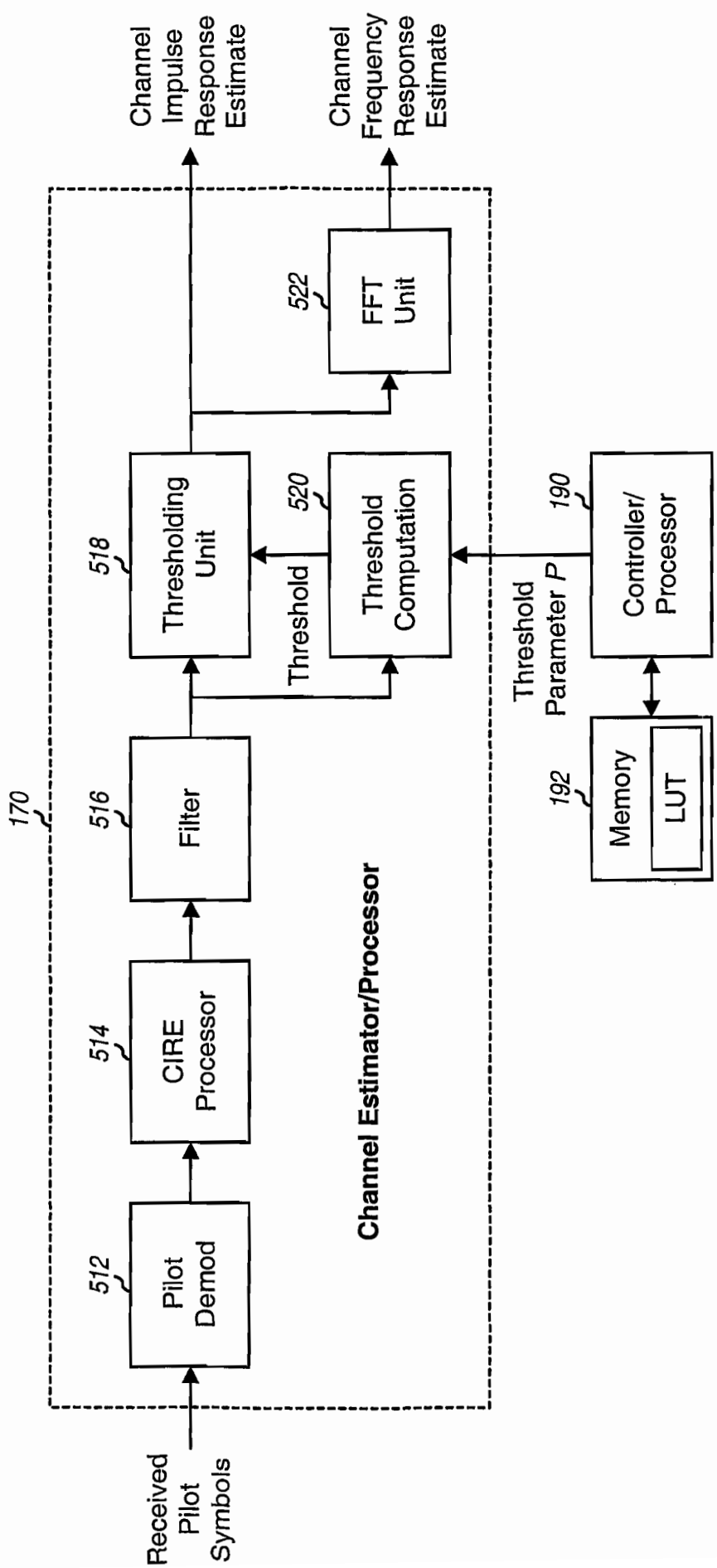

Channel Impulse Response Estimate
Channel Frequency Response Estimate
522
FFT Unit
518
Thresholding Unit
520
Threshold Computation
190
Controller/ Processor
Threshold
Threshold Parameter P
192
Memory
LUT
170
516
Filter
514
CIRE Processor
512
Pilot Demod
Channel Estimator/Processor
Received Pilot Symbols

FIG. 5

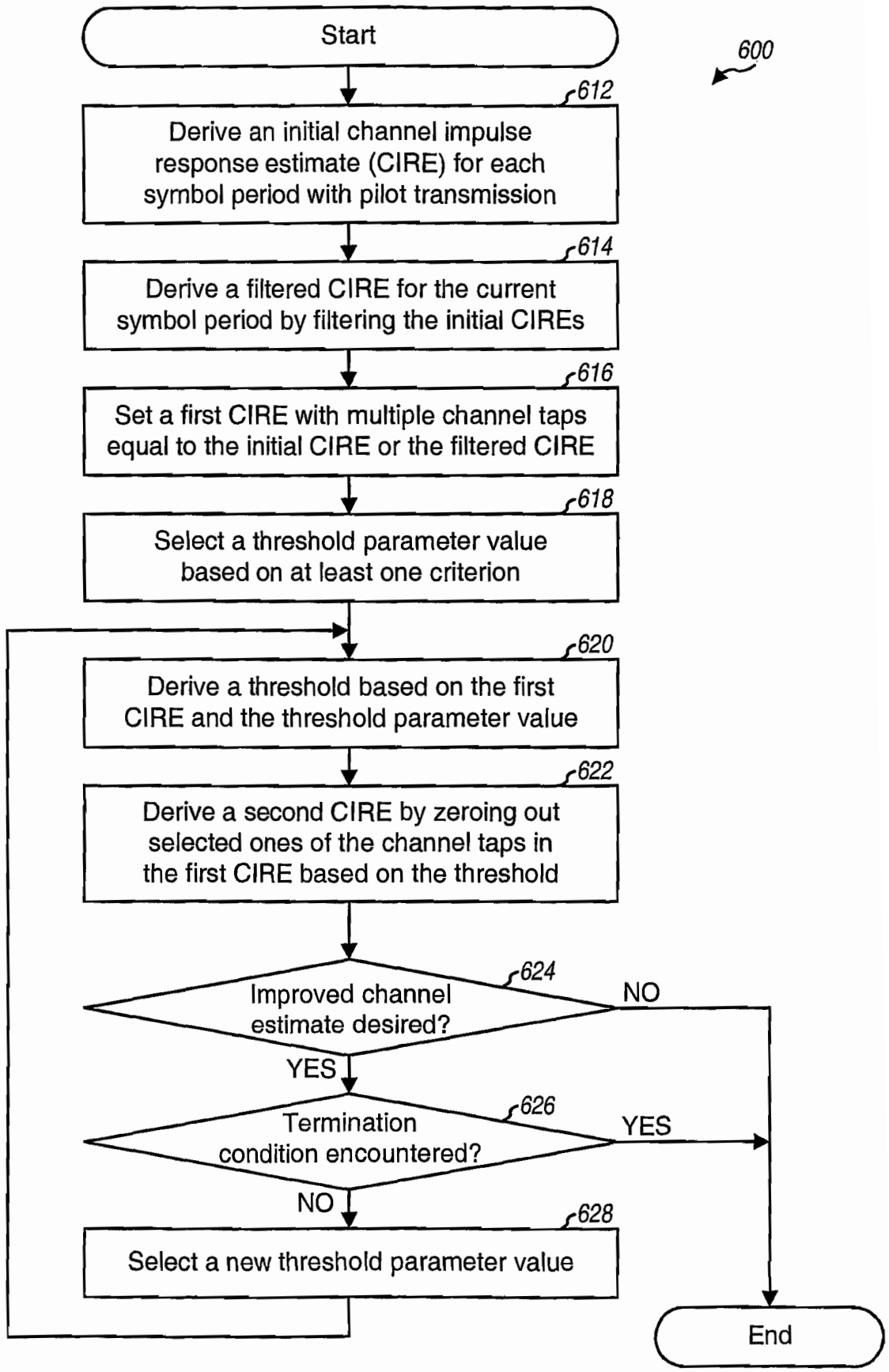

Start
600
612
Derive an initial channel impulse response estimate (CIRE) for each symbol period with pilot transmission
614
Derive a filtered CIRE for the current symbol period by filtering the initial CIREs
616
Set a first CIRE with multiple channel taps equal to the initial CIRE or the filtered CIRE
618
Select a threshold parameter value based on at least one criterion
620
Derive a threshold based on the first CIRE and the threshold parameter value
622
Derive a second CIRE by zeroing out selected ones of the channel taps in the first CIRE based on the threshold
624
Improved channel estimate desired?
NO
YES
626
Termination condition encountered?
YES
NO
628
Select a new threshold parameter value
End

FIG. 6