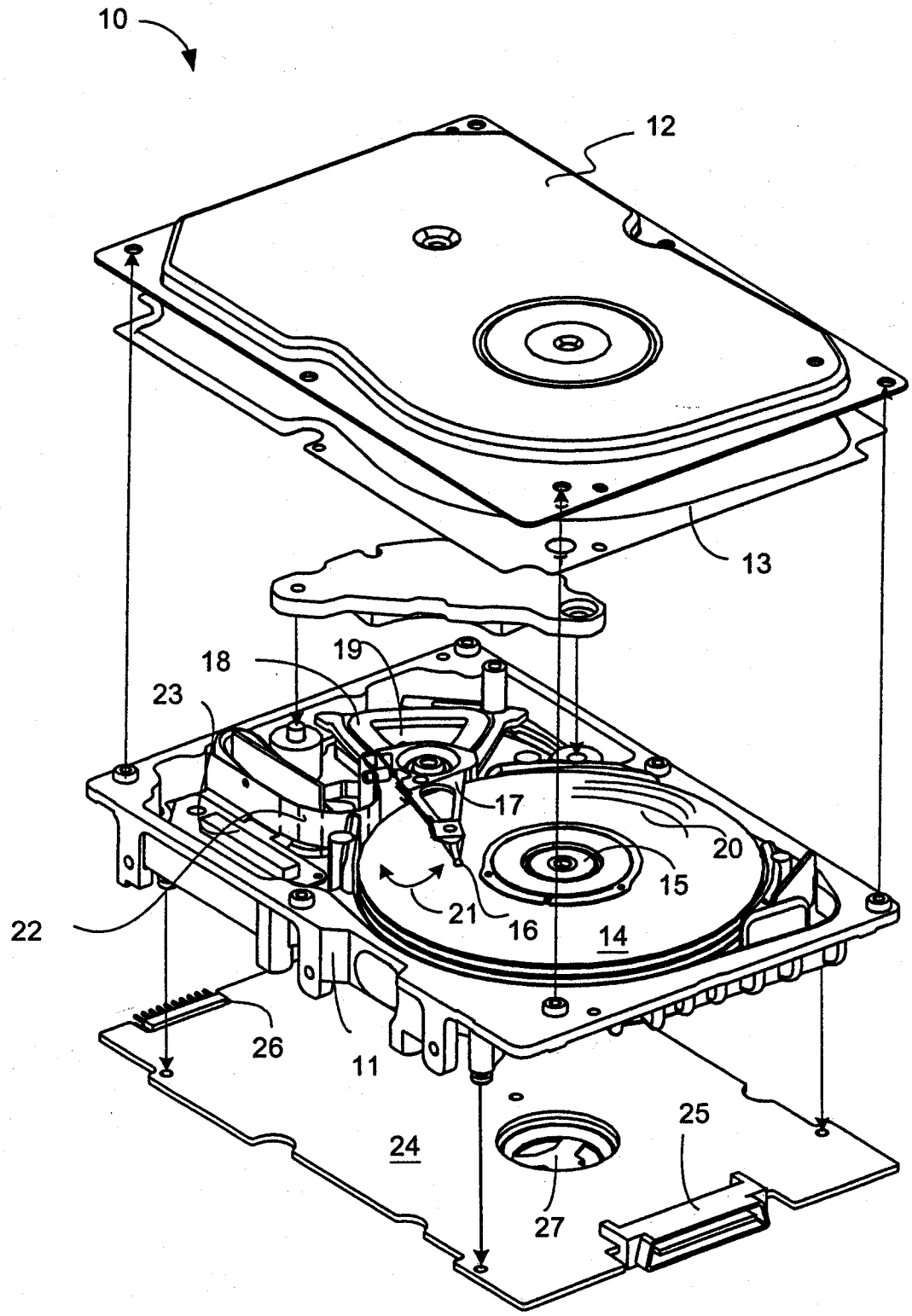


FIG. 1

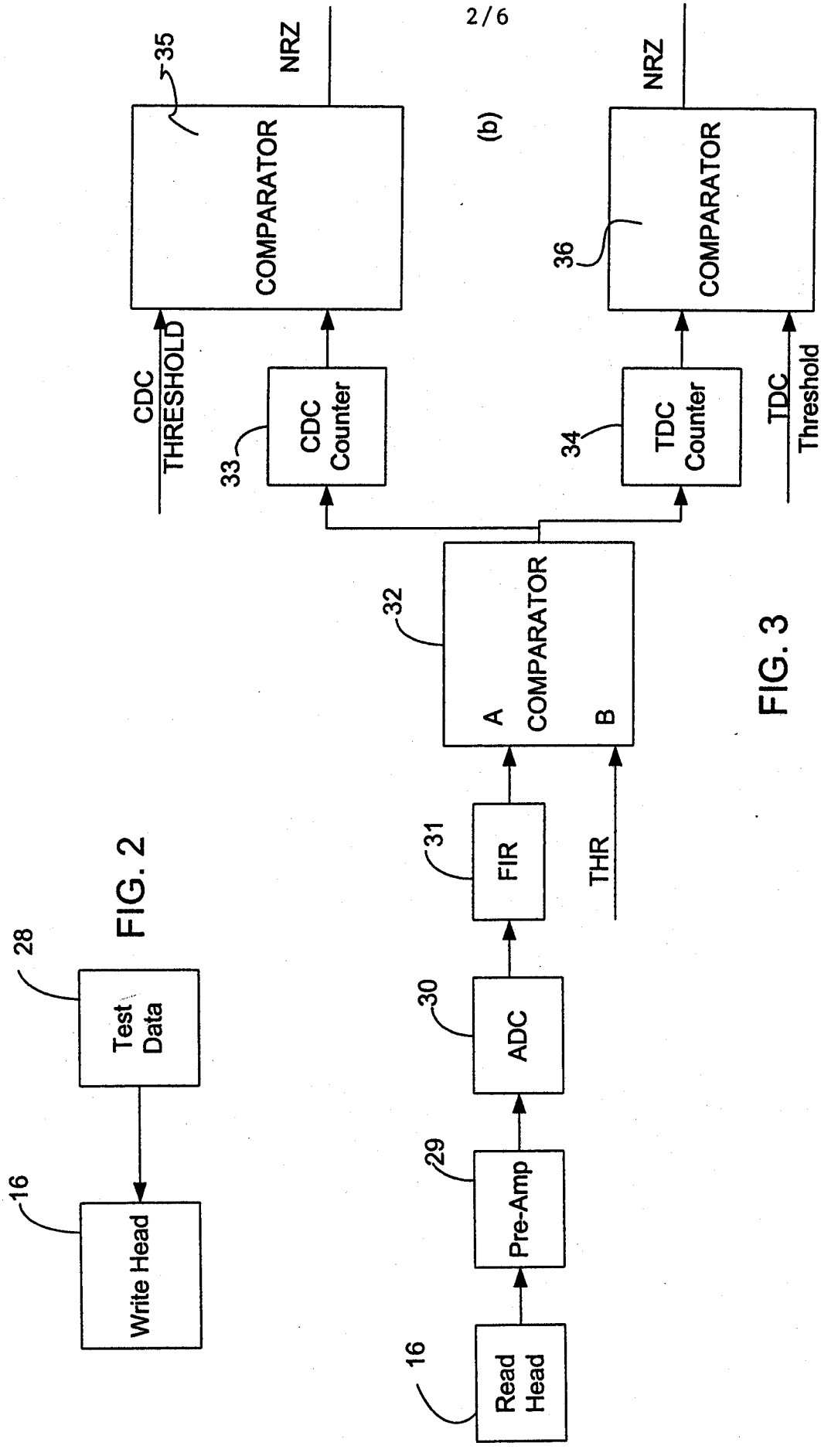

Test Data
28
Write Head
16
Read Head
16
Pre-Amp
29
ADC
30
FIR
31
THR
A
COMPARATOR
B
32
CDC Counter
33
CDC THRESHOLD
COMPARATOR
35
NRZ
TDC Counter
34
TDC Threshold
COMPARATOR
36
NRZ

FIG. 2

(b)

FIG. 3

2 1 OCT 2003

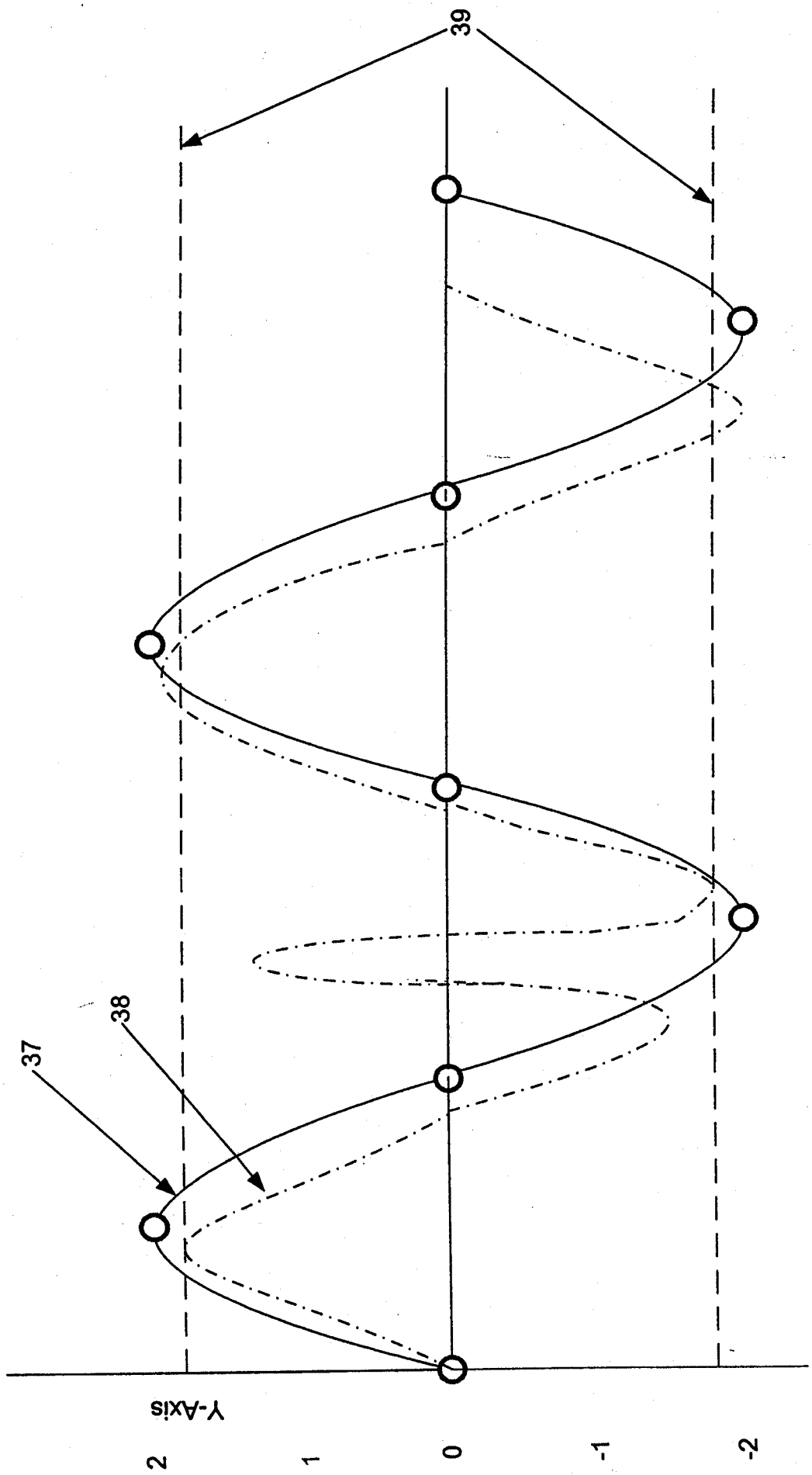


FIG. 4

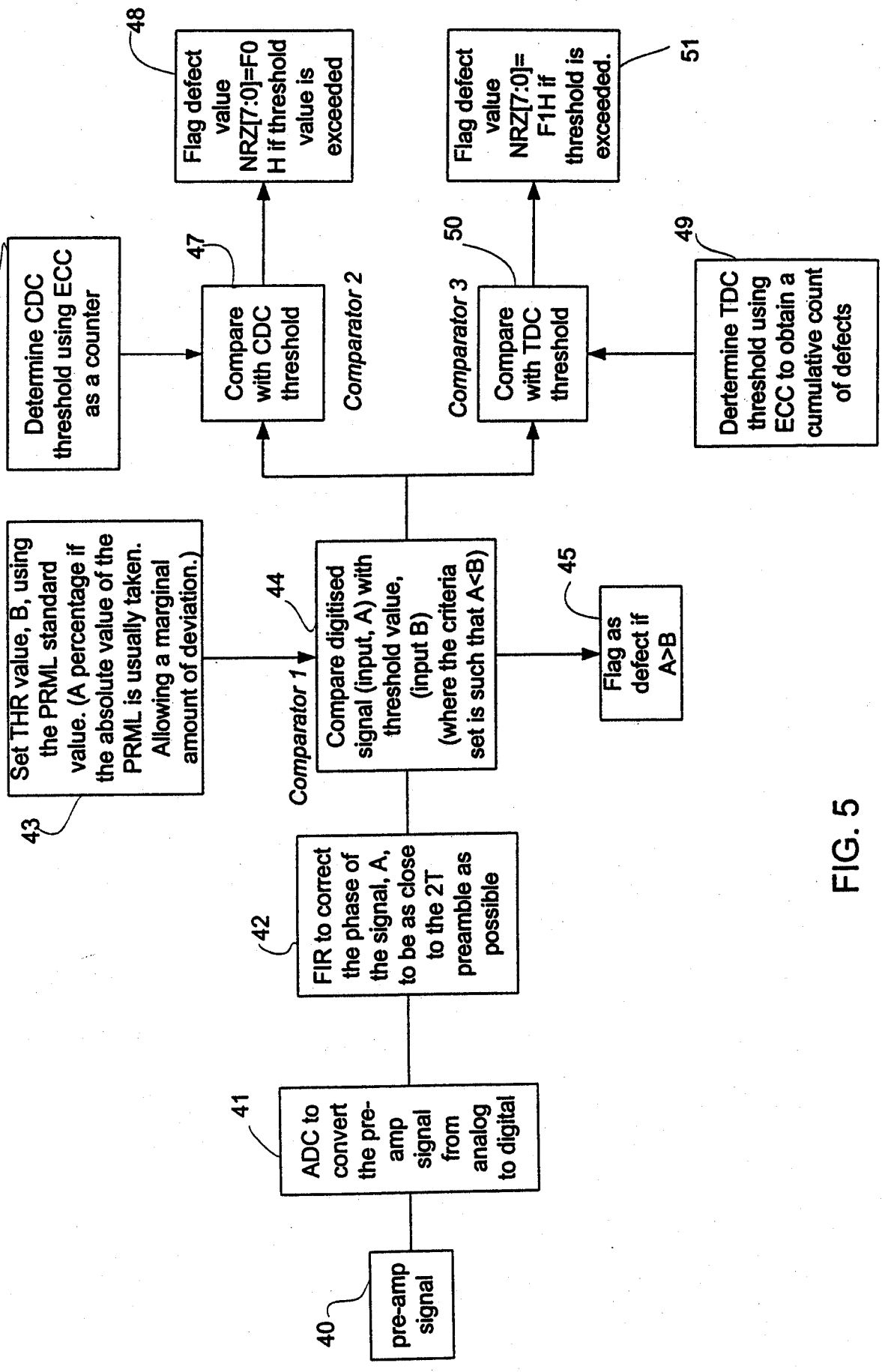

40
pre-amp signal
41
ADC to convert the pre-amp signal from analog to digital
42
FIR to correct the phase of the signal, A, to be as close to the 2T preamble as possible
43
Set THR value, B, using the PRML standard value. (A percentage if the absolute value of the PRML is usually taken. Allowing a marginal amount of deviation.)
Comparator 1
44
Compare digitised signal (input, A) with threshold value, (input B) (where the criteria set is such that A<B)
45
Flag as defect if A>B
46
Determine CDC threshold using ECC as a counter
47
Compare with CDC threshold
Comparator 2
48
Flag defect value NRZ[7:0]=F0 H if threshold value is exceeded
49
Dertermine TDC threshold using ECC to obtain a cumulative count of defects
Comparator 3
50
Compare with TDC threshold
51
Flag defect value NRZ[7:0]= F1H if threshold is exceeded.

FIG. 5

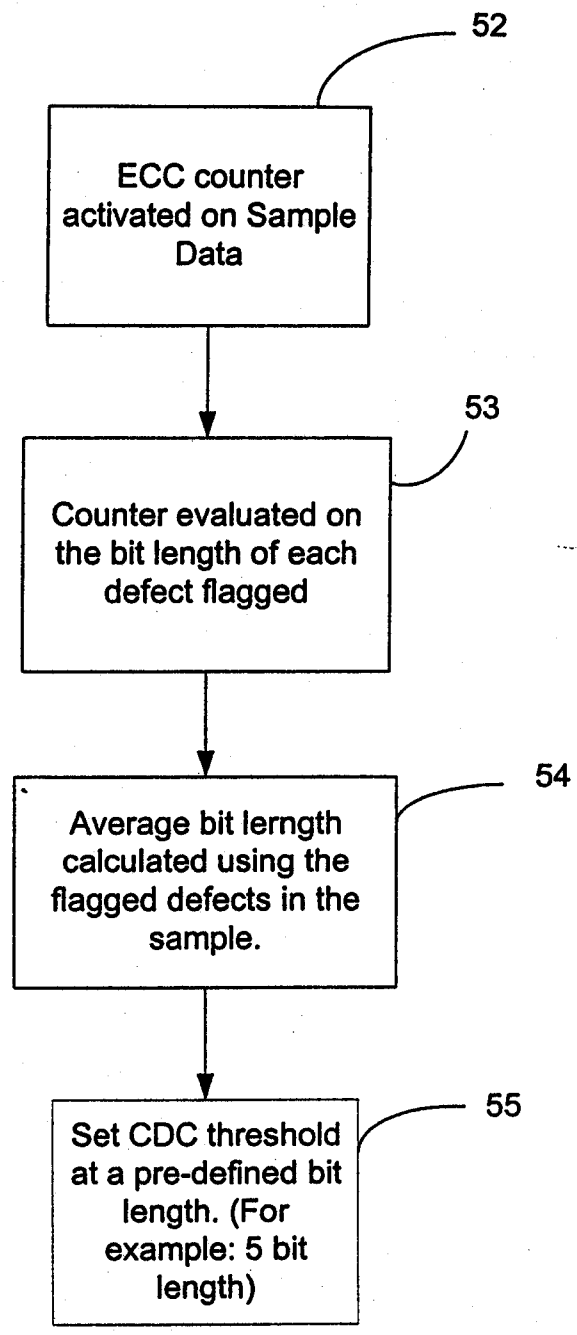

52
ECC counter activated on Sample Data
53
Counter evaluated on the bit length of each defect flagged
54
Average bit lerngth calculated using the flagged defects in the sample.
55
Set CDC threshold at a pre-defined bit length. (For example: 5 bit length)

FIG. 6

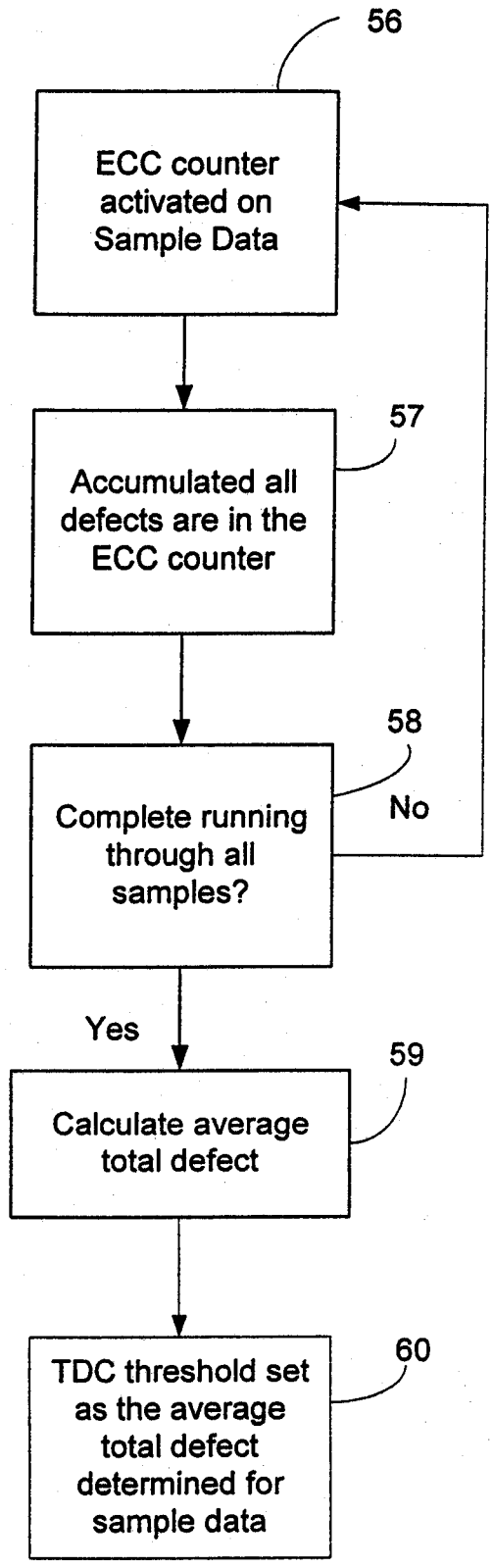

56
ECC counter activated on Sample Data
57
Accumulated all defects are in the ECC counter
58
Complete running through all samples?
No
Yes
59
Calculate average total defect
60
TDC threshold set as the average total defect determined for sample data

FIG. 7