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(30) 10/134,300 2002 04 29 (US)

(71) (, . 78735) 6501

(72) , , .
92656 8208 2

, 60067 157

(74)

(54)

- (A/D) A/D , , , , A/D
 () (dig)
 ital counterparts) (quantization noise) (harmonic distortion) , , , (artifact
 s) } (D/A) (negative feedback loop) (variability)

, DEM(Dynamic element matching) . DEM , D/A
 (calibration scheme) } ,
 A/D (Nyquist-based A/D conversion)
 , (noise floor)
 ,
 가 ,
 (resolution) A/D , , , /
 (noise shaping strategies) , , , ,
 가) DEM A/D , , , ,
 가 , , , ,
 가 , , , ,
 ent lay) , A/D , , , curr
 가 (stale , , , propagation de
 , A/D / (, , ,
 D/A) , , ,
 가 , , ,
 D/A (8 16) , (3 4) / ,
 가

1

2

.3

4

5

8

9

가

가, 가

가

가

가

가

가 /

7 15
, 63

6

4

3 4

(10) 1

(13)

(Y)

가

(10)

(X)

(12)

(11)

(13)

(15)

(11)

가

1

(10)
(15)

가

(DEM; 14)

DEM(14)

, DEM(14)

(11)

가

(Y)

2 DEM(14)

4

, '3'

가

3

가 '1'

, '3'

, (assortment) DEM(14), (22 23), (21 24)
가 '3' 가 ,

3 , DEM(14)
1 ,

가 , 7
 5, 6 7

(51, 52) , DEM(14) 1(51) , '3' 3
 53) . 6 , DEM(14) , '2' , DE
 M(14) 4(61) . (61 62)
 7 , '4' , DEM(14) 6(71)
 3 (72, 73 74)

A diagram showing a 4-bit binary counter. The bits are arranged from least significant bit (bottom) to most significant bit (top). The values are: 0, (least significant bit), 1, 0, 3, 2, 0. The label '2' is placed under the third bit from the bottom.

(effective noise floor)

(signal dependent tones)

가

가 (39) (3). , DEM(14) (iteration)

, DEM , (propagation delay) 가 . . . D/A

(57)

1

가

(operably)

;

(dynamic element matching unit)

가, 가

2.

1

3.

2

가

4.

3

가

(logical low)

5.

4

가

6.

5

가

7.

6

,

,

8.

7

,

가

9.

7

,

,

,

10.

9

,

,

가

(next-to-be-determined output information)

11.

가

- ;

;

;

;

12.

11

,

,

13.

12

,

가

,

14.

13

,

가

,

가

가

15.

12

,

가

,

16.

15

,

가

,

가

11

,

,

가

,

18.

11

,

,

가

,

19.

18

20.

19
(cle)

2

(every other clock cy

21.

18

22.

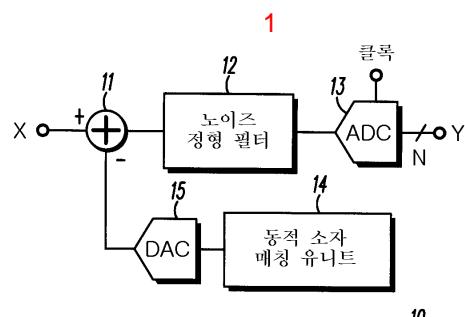
21
(random)

(pseudo-

23.

18

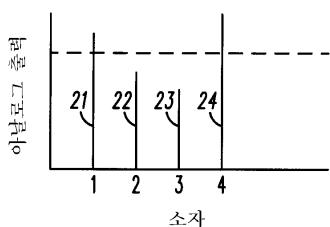
가

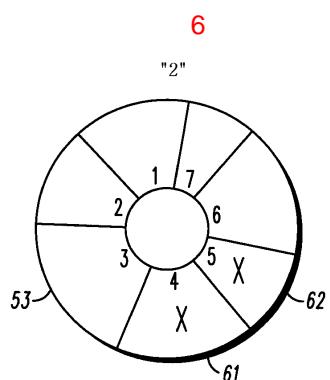
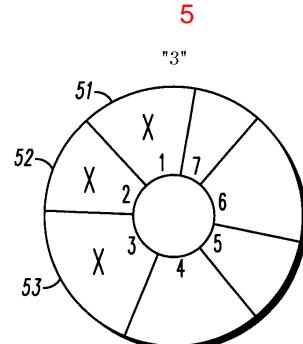
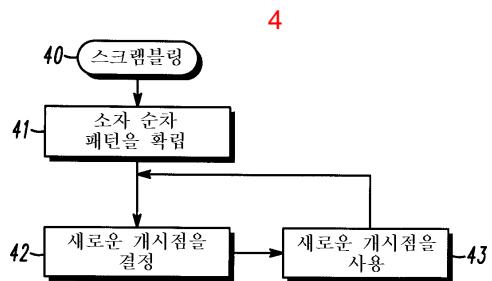
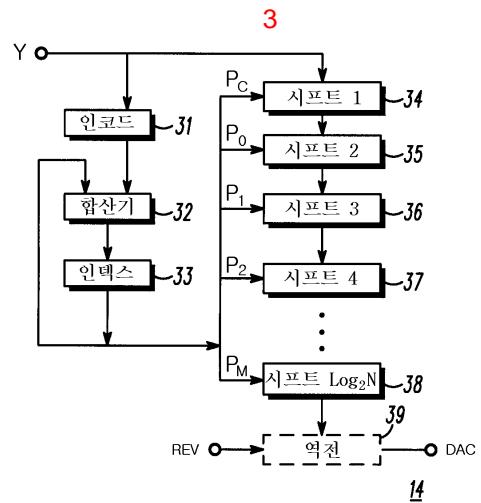


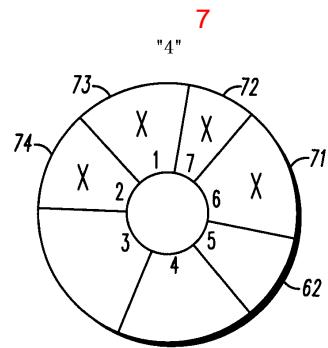
1

10

2







8

