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(72) -82152 7

(74)

:

(54)

SDARS , ,
HF B , M-PSK 1
(5a), M-PSK 2 (5a'), (ter
restrial radio station) COFDM (5b)
(traveling time)
(20) (3) ,
(3a, a', b) 가 (25a, 25a', 25b)
) (3a, 3a', 3b) ,
(18a, 18a', 18b) 가 (2a, 2a', 2b)
, (3b) (3a, 3a')
(3) (20)
(2a, 2a', 2b) , (5a, a', b) 가 (2a,
2a', 2b) (2a, 2a', 2b) (S1, S2, ...)
,
(5a, 5a', 5b)
가 , 가

SDARS,

- 1
- 2 (40)
- 3 2 (40) (motor vehicle)
- 4 (25) (49 48)
(40)
- 5 4 (49 48) (40)
- 6 (40), (symbol cycle signal)(18) (30)
(52)
- 7 6
- 8 (40),
(3)
- 9 (elementary radiator)
(40) 8
- 10 (52) (3)
- 11 10

< >

- 1
- 2
- 3
- 3a, 3a', 3b
- 4a, 4b, 4c
- 5a, 5a', 5b

18

20

21

25

30a, 30a', 30b

36

40

41 HF

42 HF-IF

44

45

45a (45) 1

45b (45) 1

46

47a, 47a', 47b

48

49

50 (40)

51 (40)

52

54

S1, S2, S3.. 가

,

f

'SDARS' (multiple propagation), (shading) (error rate) (offset) (signal content) QPSK-COFDM
 4MHz 가 , f=2.33GHz (high-frequency/intermediate-frequency; HF-IF) (frequency band) (42) 가
 / (shift) 가
 (de-correlated reception)

'Rice' (wave) (statistical superimposition) 'Rayleigh' (multi-way fading)
 (probability density distribution)

FM
 가

SDARS

1

가 , p_s , n , $p_d = p_s^n$
 가 (effective) , $n_{SDARS} = 3$
 $n_{total} = n_t + n_{s1} + n_{s2}$, n_t, n_{s1}, n_{s2}
 $n_{total} = n_{total} - n_{SDARS}$ 가
 n_{total}

가
 가

가

가

1

(1)

가 (3a, 3a', 3b), (2a, 2a', 2b) (reception level testing element) (36a, 36a', 36b) (25a, 25a', 25b) (1) 'z'

(3a, 3a', 3b)
 $n_{total} = 3 \times (z-1)$. SDARS
(46)

(3) , 3 x z
가 . ,

lectronic assemblies)

가 가 (e)

가 SDARS
가 n_{total}
SDARS

(40) 2
148-7191 [3/2001] PATSIOKAS (48)

(49)
XM Satellite, SAE 2001-01-1328, ISSN 0

가 , 2 ,

HF-IF (42) (47)

가 (25) , (49)

가 가 ,
가 (47a, a', b)
(rectifier)

(36a, a', b)

(25a, 25a', 25b)

(47a, 47a', 47b)

(band)

가

, $n_{s1} = 2, n_{s2} = 2$ n

$t = 2,$ 가 , 2 $n_{total} = 3 \times 2 - 3 = 3$

가 $n_{SDARS} = 3$

, 3

(47)

가

(46)

가

가 ,

(40)

가 ,

(40)

)

가 , 3 (40)

가

, 3

SDARS

(convertible)

(47)

$n_{total} = 3 \times 4 - 3 = 9$
가 (46)

가

4

(3)가

(18)

(30)

가

(50)

(40)

(25a, 25a', 25b)

(vertical polarization)

(reversing switch)(51)가

(40) ,

(45) 1 (45a) 2

(elementary radiator)(44),

(circular polarization)

5)

(45b)가

(51)

(4

(50)

(45) 1 (45a) 2

)

(53)

(49)

(49

(42b)

가

가

가 HF-IF

(45a, 45b)

(45b)

(45)

$n_t = 3.2$ 가

(49) 가
(49) . $n_{s1} = n_{s2} = 2.5$
. $n_{total} = n_t + n_{s1} + n_s$

2 8.2가 , $n_{total} = 5.2$ (40)
vision) (line damping effect) HF- 가 (power di

5 4
(48) (49) 가,
(48) (49) (40) (50)

(25) 가 가 4
가 가 가 (48) (48)

가 가
 $n_t = 2$ 가
 $n_{s1} = n_{s2} = 1.7$ 가
 $n_t + n_{s1} + n_{s2} = 5.4$ 가
(50)가 (40) , $n_{total} = 2.4$ $n_{total} =$
(25) , $n_{total} = 2.4$

(46) , (40)

ARS (40) (52) 가 , 6 가 SD
(2a, 2b) 가 , (52) (3)

가 가
 $n_t = 4$ 가
 $n_{s1} = n_{s2} = 2.8$ 가
9.6 , $n_{total} = 6.6$ 가 ($n_{total} = n_t + n_{s1} + n_{s2} =$ (40)

(3)가 , SDARS-
(40) (52) (2) 7 6 , 2
(3)

(46) (52) (3) 가 ,
 $n_{s1} = n_{s2} = n_t = 2.4$ 가 , n
total = 7.2가 , $n_{total} = 4.2$ 가 (52)

(46)

가 (25) 가 8
(40) (3) (50)가 가 가
(46) 가
(21) 가
 $n_t = n_{s1} = n_{s2} = 1.5$, $n_{total} = 1.5$ 가
가

가 9 , 4
 (40) , 8
 가 (3)가 (21) 가 (46)
 9 (40)
 $n_{t1} = n_{s1} = n_{s2} = 2.2$ 가 $n_{total} = 3.6$ 7
 (40) (5)
 1) (50) (electronic measures)
 가
 가 가
 가 (54) (patch antenna)
 10 가 6
 $n_t = 4$ 가 $n_{total} = n_t + n_{s1} + n_{s2} = 9.6$ (sectorial coverage) 가 $n_{total} = 6.6$ $n_{s1} = n_{s2} = 2.8$
 3 가 Rayleigh-가
 가
 11 가 10
 (52) (3) (46)
 $n_t = n_{s1} = n_{s2} = 2.4$ 가 $n_{total} = 4.2$

SDARS

(57)

1.
 SDARS HF B M-PSK 1 (5a'), (ter)
 (5a), M-PSK 2 COFDM (5b)
 terrestrial radio station) (traveling time) (20)
 (3) ;
 (3a, a', b) 가
 ;
 (25a, 25a', 25b) (3a, 3a', 3b) ;
 (18a, 18a', 18b) ;
 가 (2a, 2a', 2b) (3a, 3a') (3)
 b) (3)

가 (20) (2a, 2a', 2b) , (5a, a', b) (25a, 25a', 25b)
(2a, 2a', 2b) (2a, 2a', 2b) 가
(S1, S2, ...)

(5a, 5a', 5b)
가 , 가

2.

1 ,

(49, 48) 가 ,
(40) -

- ;

HF-IF (42) ,
(3) ,

(3) (25a, 25a', 25b) (47a, 47a', 47b) (47a, 47a', 47b)
(48) (49) 가 가
(46) -

3.

1 ,

(48) (49) 가 (3) - (

46) - ;

(47a, 47a', 47b) - 가 가
HF-IF -

4.

1 3 ,

(44) , 1 (45a) 2 (45b) ,
(51) (45b) (40) , (45) 1 (45) 2
(45b) , (45) 가

;

(45) (44) 가
(50) (48) , (40) (48) (49)
(48, 49) 가 ; (25a, 25a', 25

b)

(3) (30a, 30a', 30b) (18a, 18a', 18b)가 (3)가 (

40)

5.

4 ,

(40)
(44) 가

(45) 가
가

;

(49) 가

(50)
(25a, 25a', 25b)

,
(48, 49)

가

(48)

(40)

6.

1 ,

SDARS

(40) -

(40)
가

(2a, 2b)

(49, 48) 가
(25a, 25a', 25b)

(52)

- ;

(3)

(30a, 30a', 30b)
(25a, a', b)

(18a, 18a', 18b)가

(3) -

(52)

(2a, 2b)

(46)

7.

6 ,

(signal branching)

18b)가

(3) -
(52)

(3)
(25a, a', b)

(30a, a', b)
-

(18a, 18a',

(46)

(2)가
(3)

(52)

(2)

8.

7 ,

(40) ,
(44)

(45) 가

;

(21)

(25a, 25a', 25b)

(40)

(21)

가

(50)
(40)

(3)

(46)

) ;

(40)

(30a, 30a', 30b)

(25a, 25a', 25b)

(18a, 18a', 18b)

(3)

9.

4 ,

(40)

(21)

(21)

(45)

(3)

(46)

;

(30a, 30a', 30b)
(25a, 25a', 25b)

(18a, 18a', 18b)

(3)

(40)

6 10. ,

(40)

;

가 3

(54)

7 11. ,

(40)

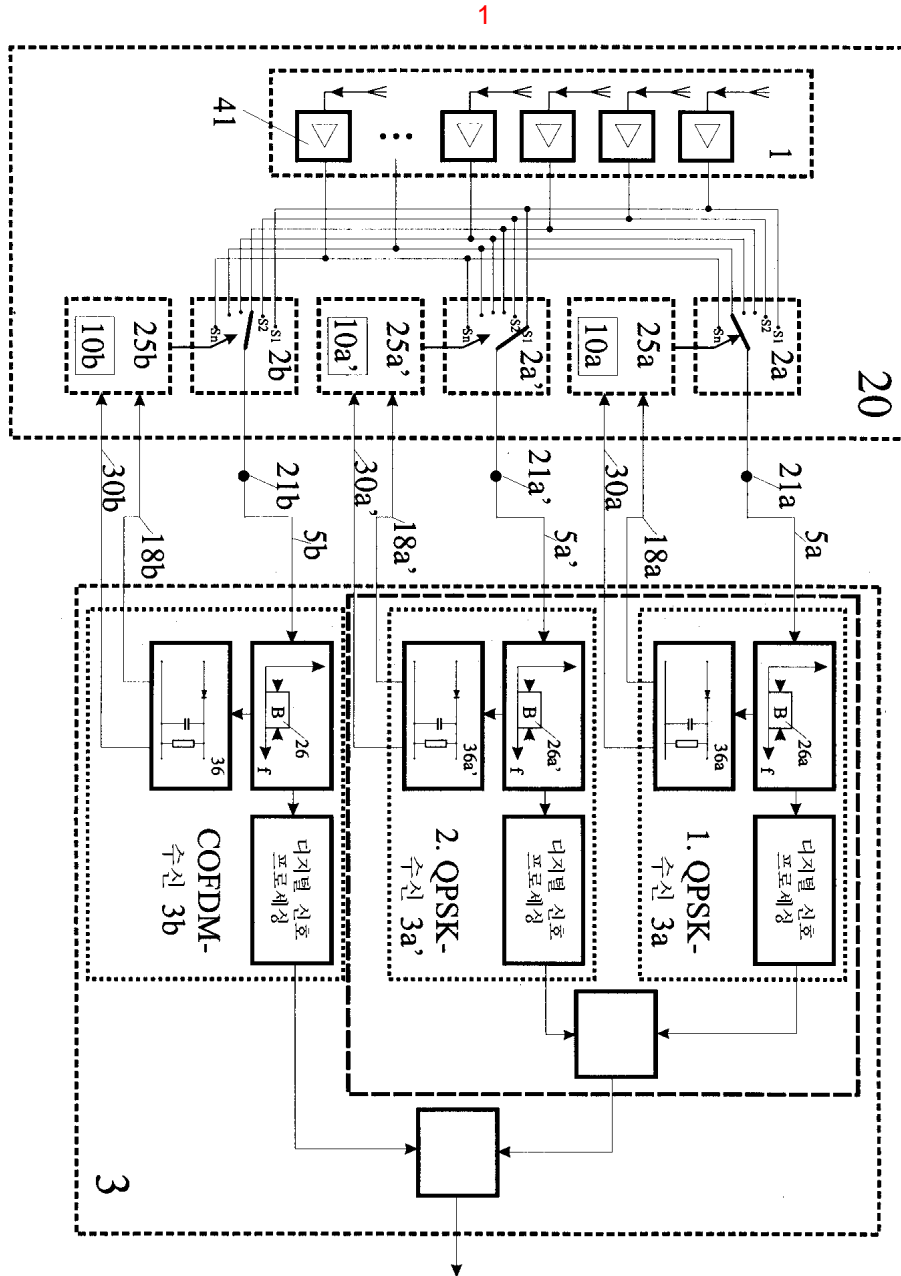
(48, 49)

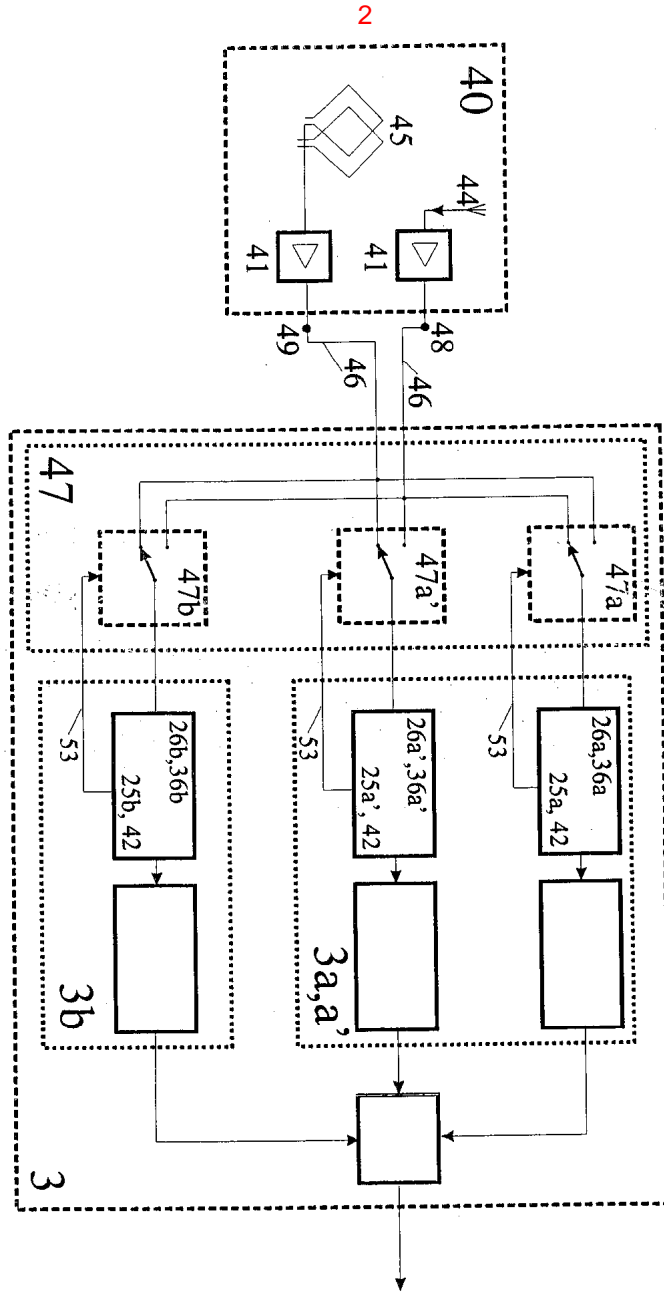
;

, 3

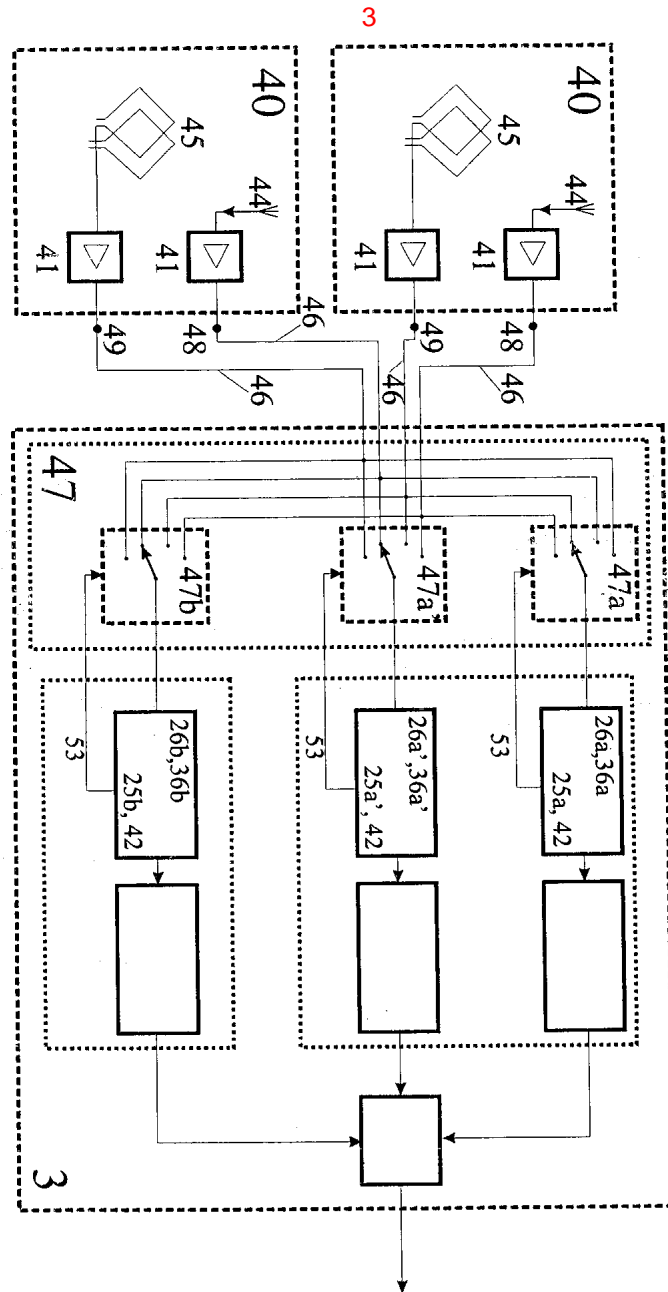
(54)

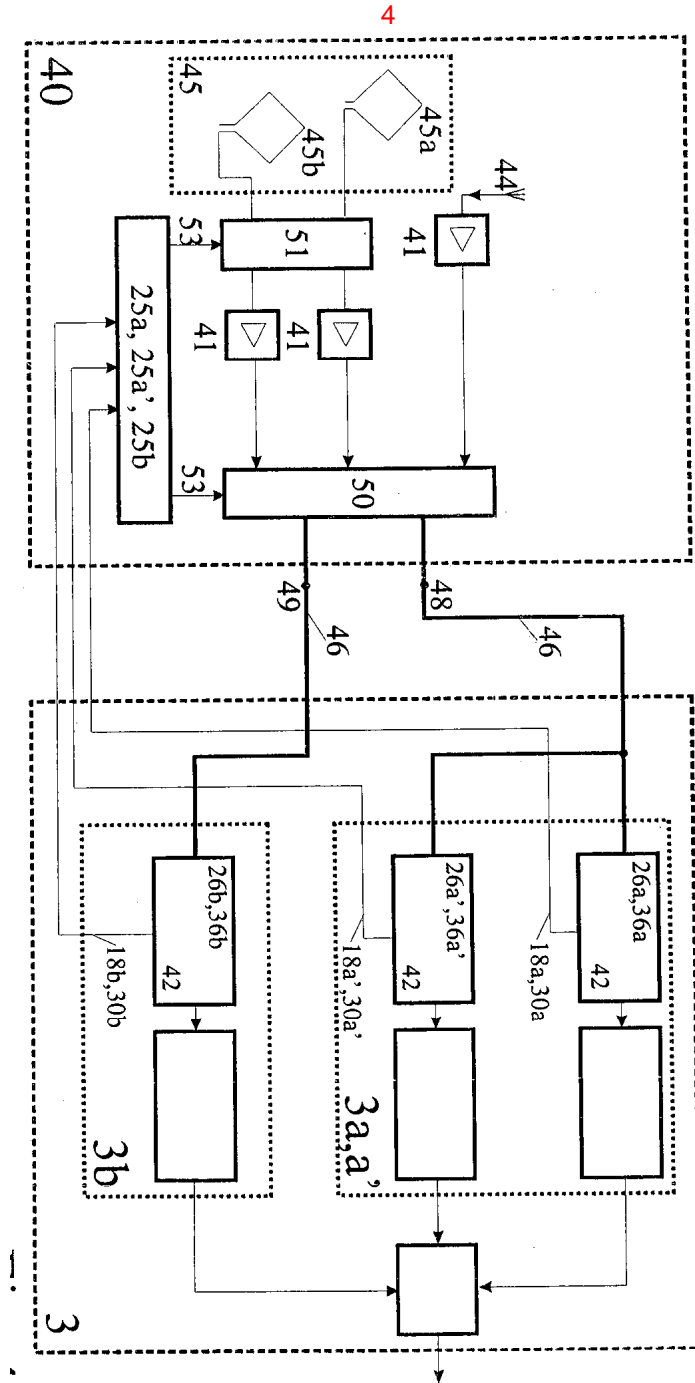
가

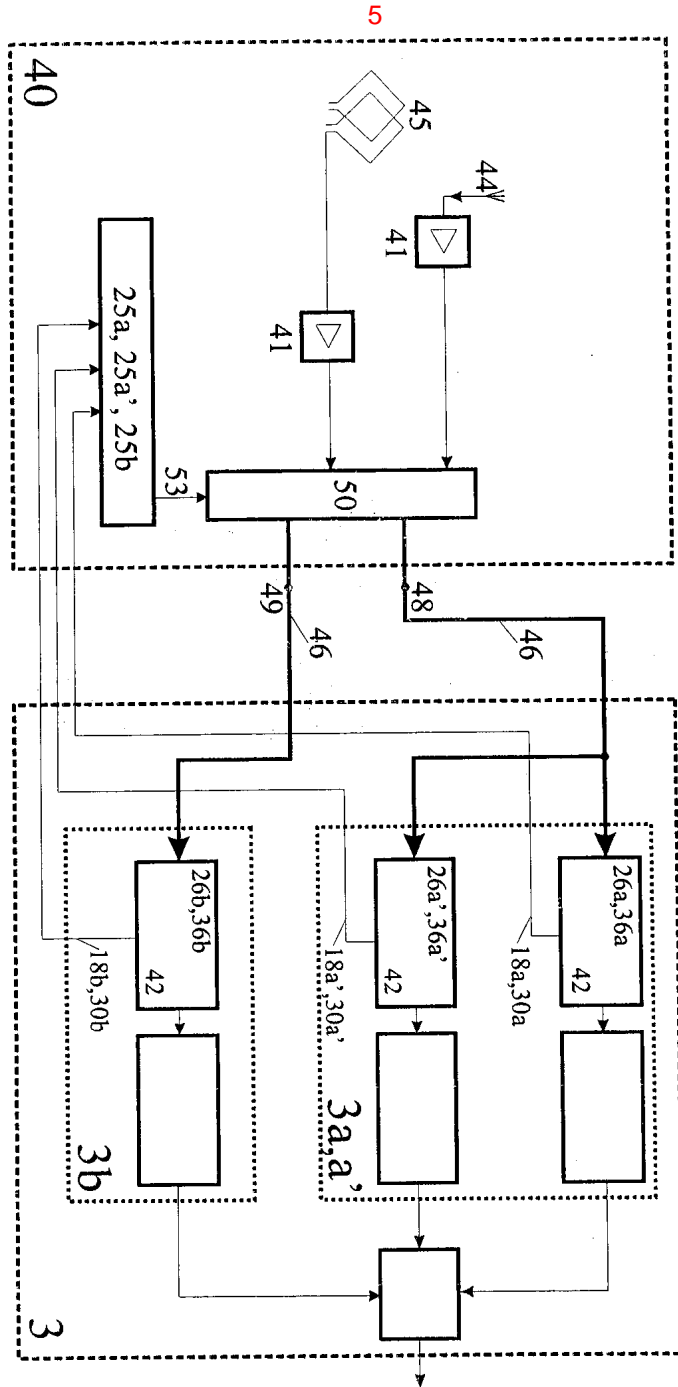


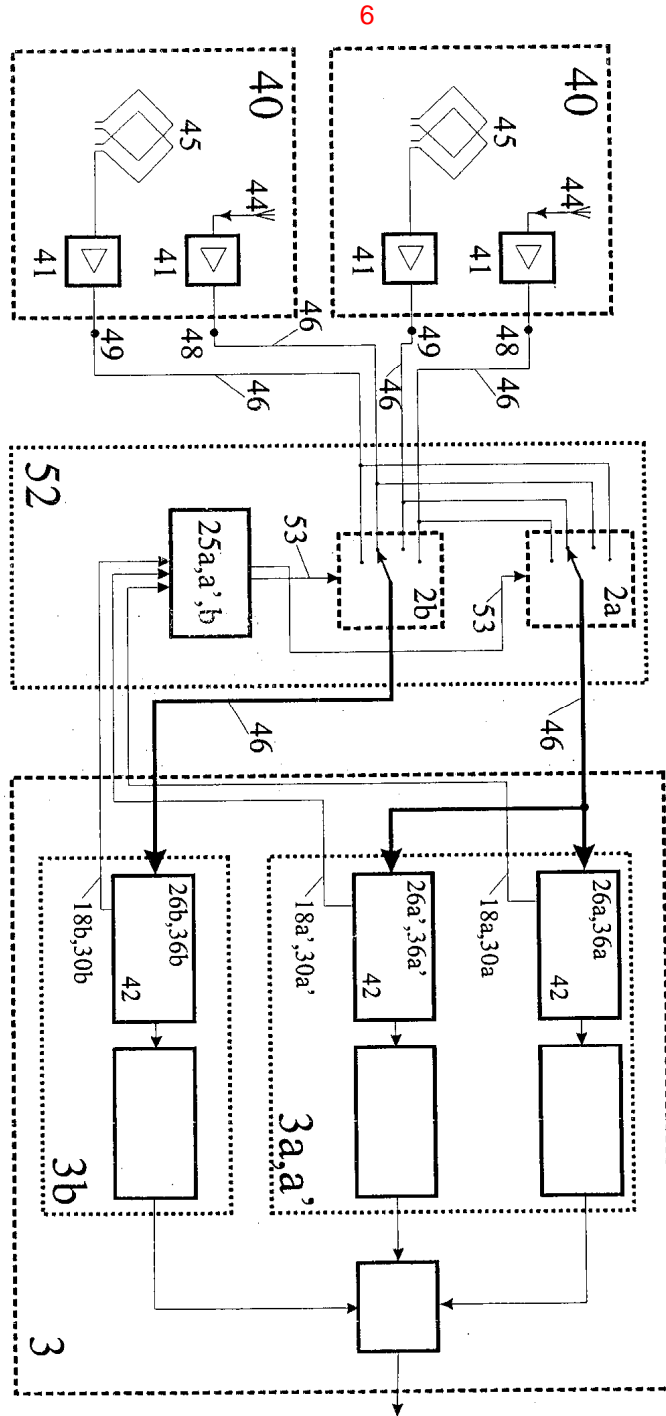


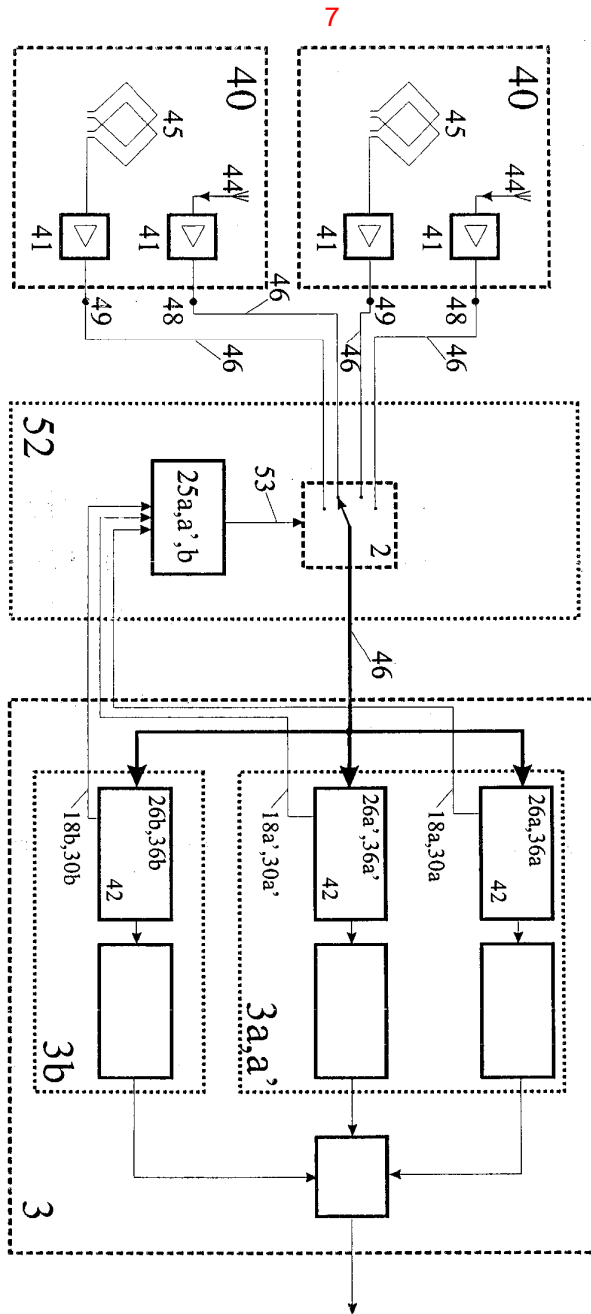
2

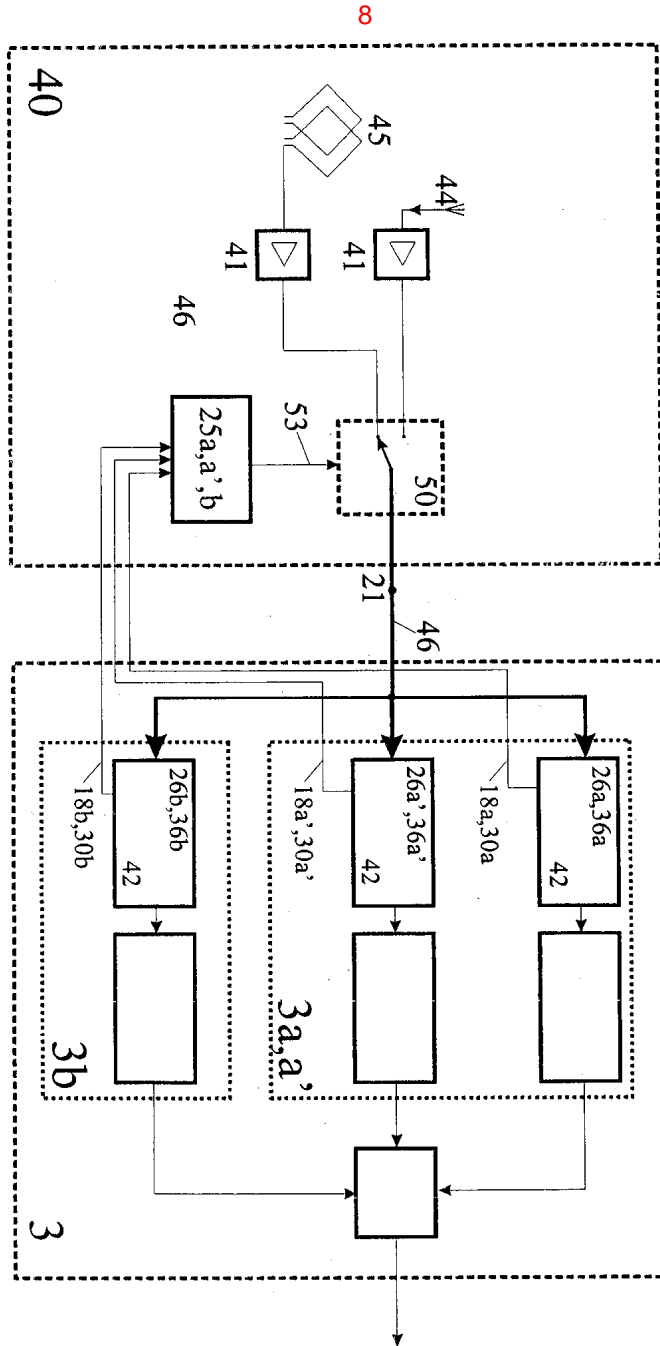


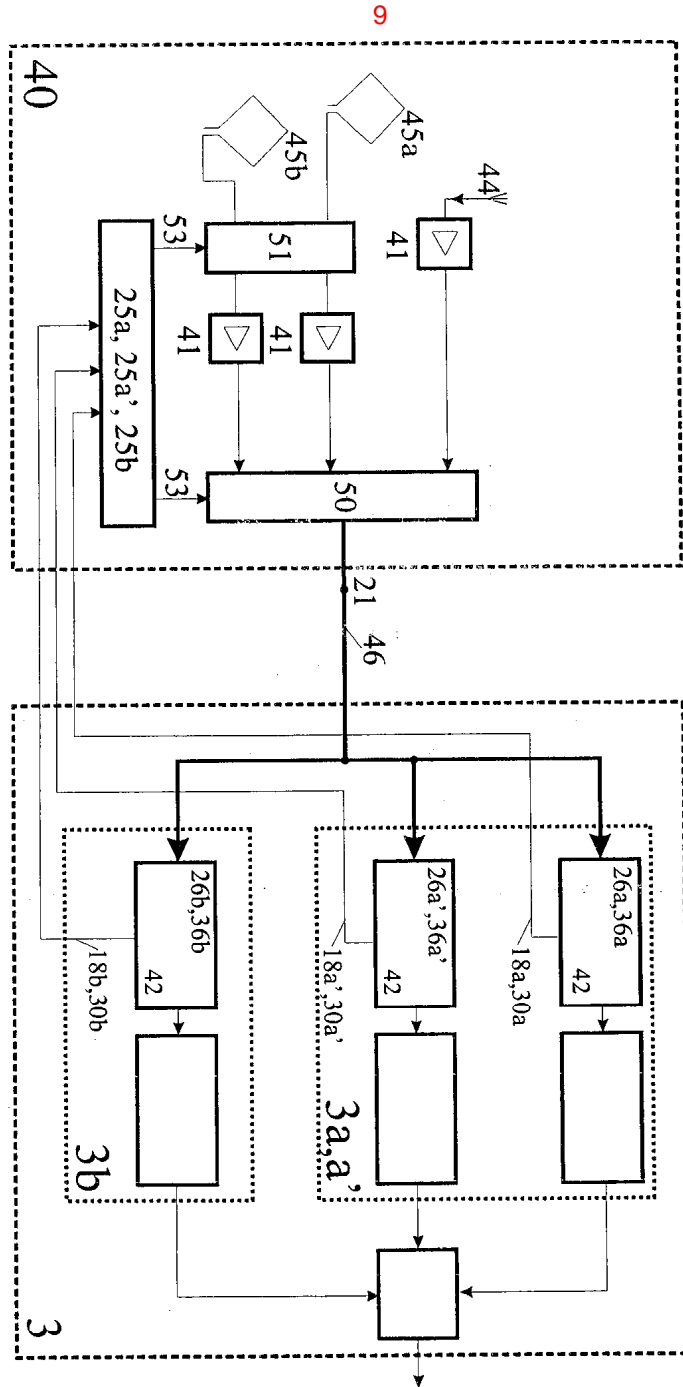




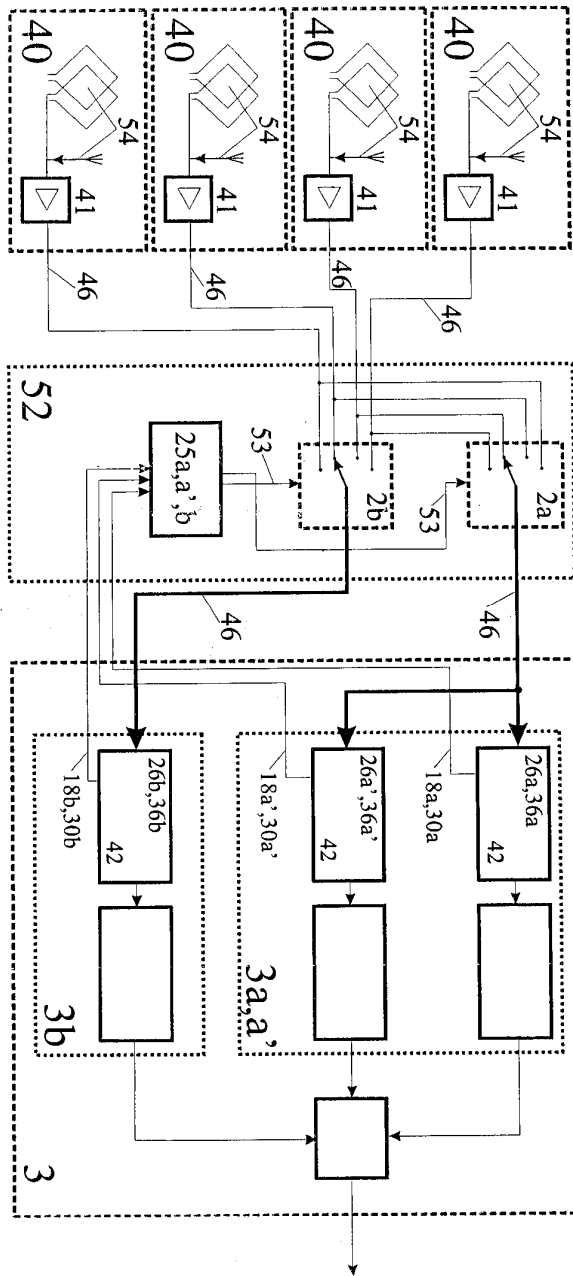








10



11

