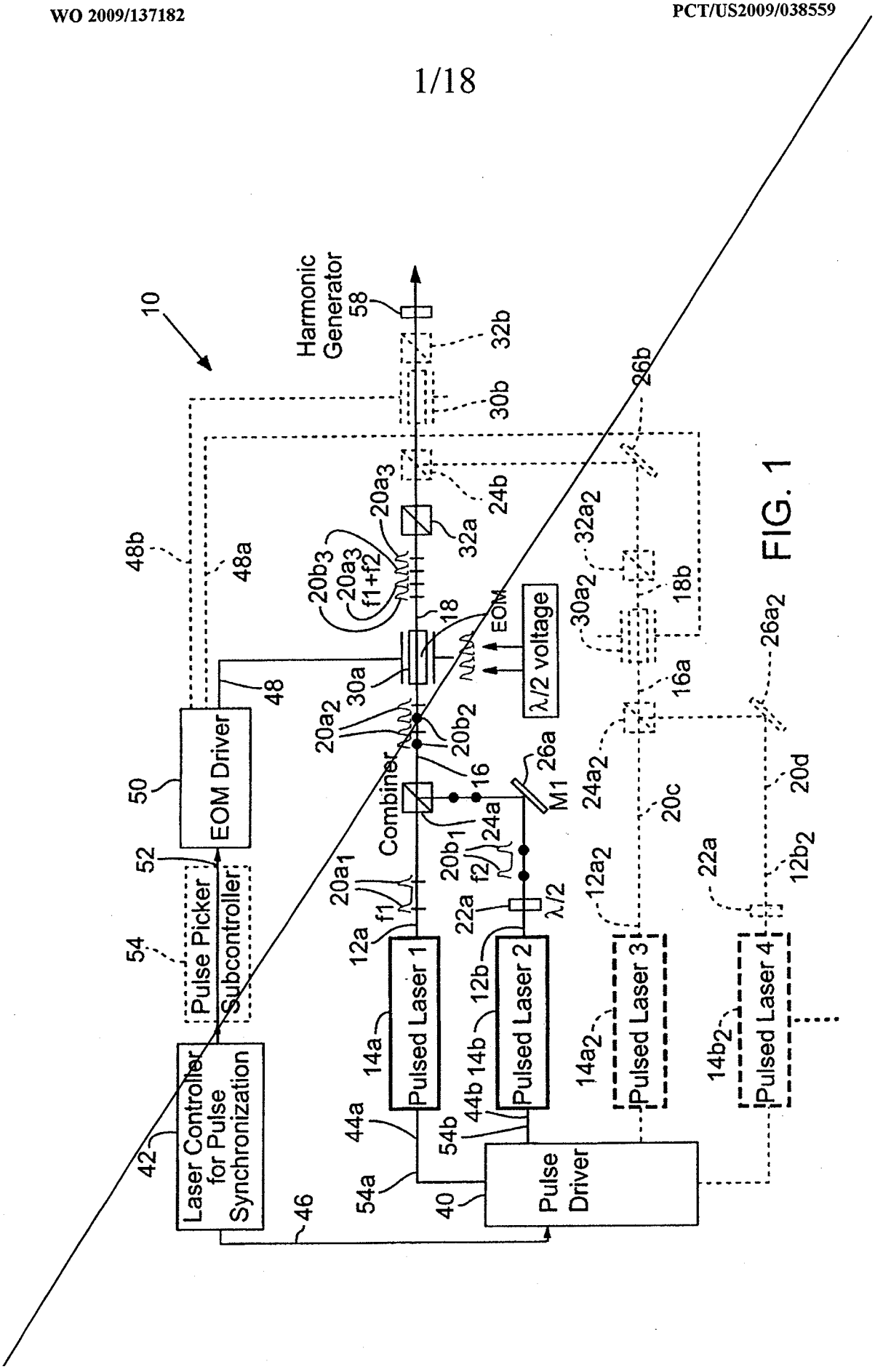
10
Harmonic Generator
58
32b
30b
26b
48b
48a
20a3
24b
32a
32a2
20b3
20a3
f1+f2
18
EOM
λ/2 voltage
30a2
18b
48
30a
16a
26a2
20a2
20b2
Combiner
16
26a
M1
24a2
50
EOM Driver
20b1
24a
20c
20d
52
Pulse Picker
Subcontroller
20a1
f1
f2
λ/2
22a
12a2
12b2
54
12a
12b
Pulsed Laser 1
Pulsed Laser 2
Pulsed Laser 3
Pulsed Laser 4
14a
14b
14a2
14b2
44a
44b
54b
42
Laser Controller for Pulse Synchronization
54a
40
Pulse Driver
46

FIG. 1

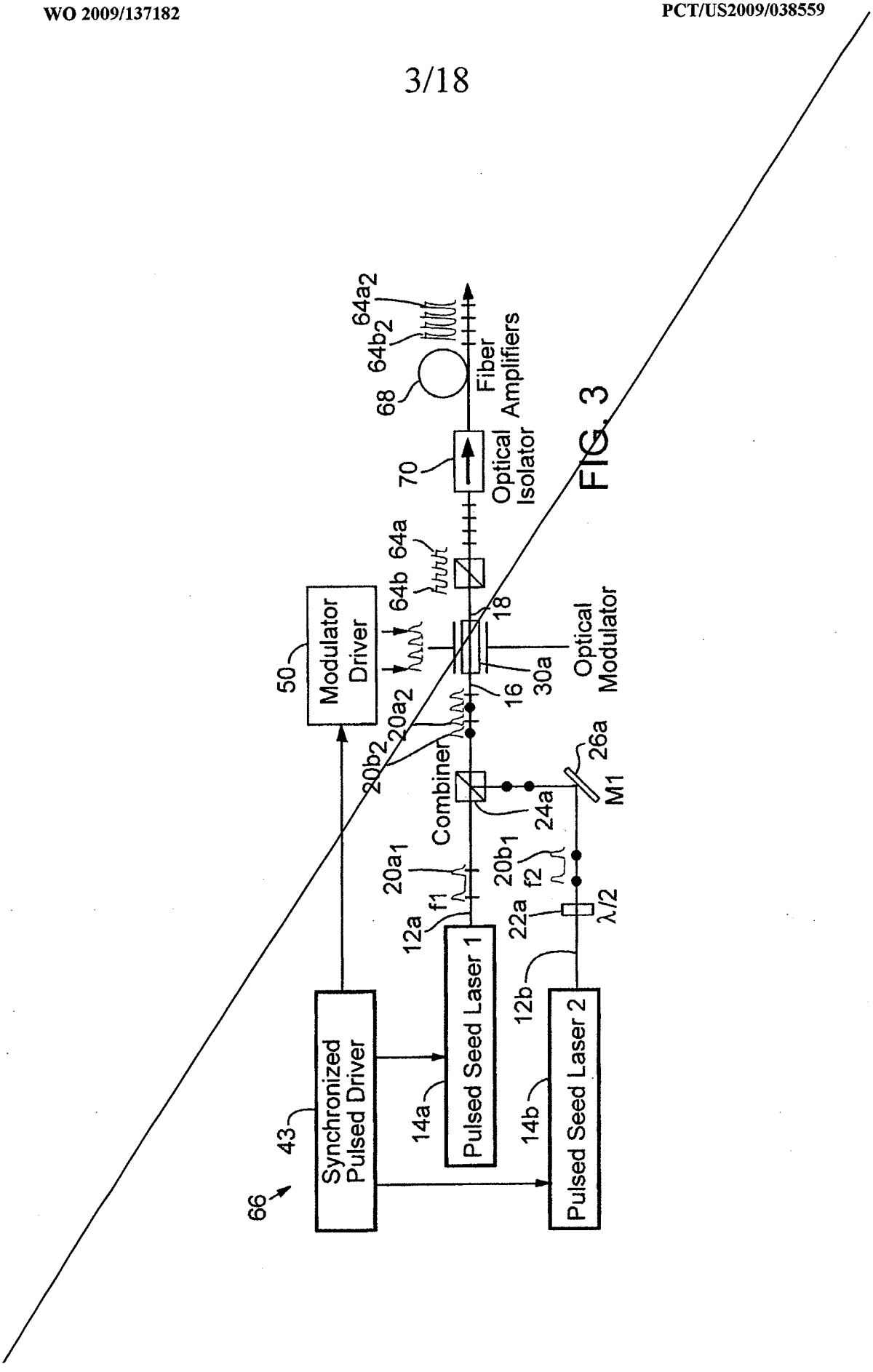
Synchronized Pulsed Driver
43
66
Modulator Driver
50
Pulsed Seed Laser 1
14a
Pulsed Seed Laser 2
14b
12a
12b
f1
f2
20a1
20b1
22a
λ/2
Combiner
24a
20a2
20b2
26a
M1
Optical Modulator
30a
16
18
64a
64b
Optical Isolator
70
Fiber Amplifiers
64a2
64b2
68

FIG. 3

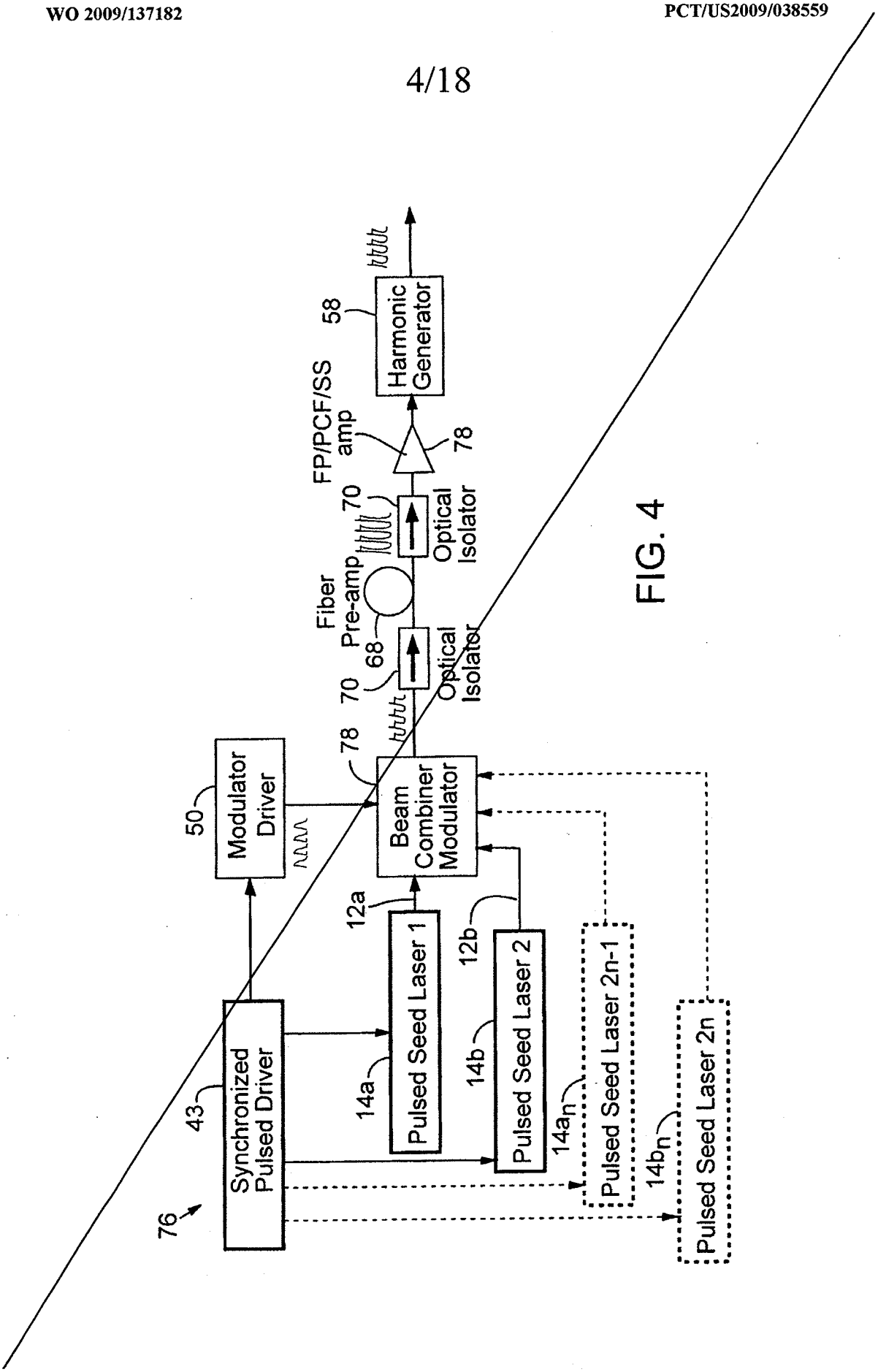
Synchronized Pulsed Driver
43
76
Modulator Driver
50
Pulsed Seed Laser 1
14a
Pulsed Seed Laser 2
14b
Pulsed Seed Laser 2n-1
14an
Pulsed Seed Laser 2n
14bn
12a
12b
Beam Combiner Modulator
78
Optical Isolator
70
Fiber Pre-amp
68
Optical Isolator
70
FP/PCF/SS amp
78
Harmonic Generator
58

FIG. 4

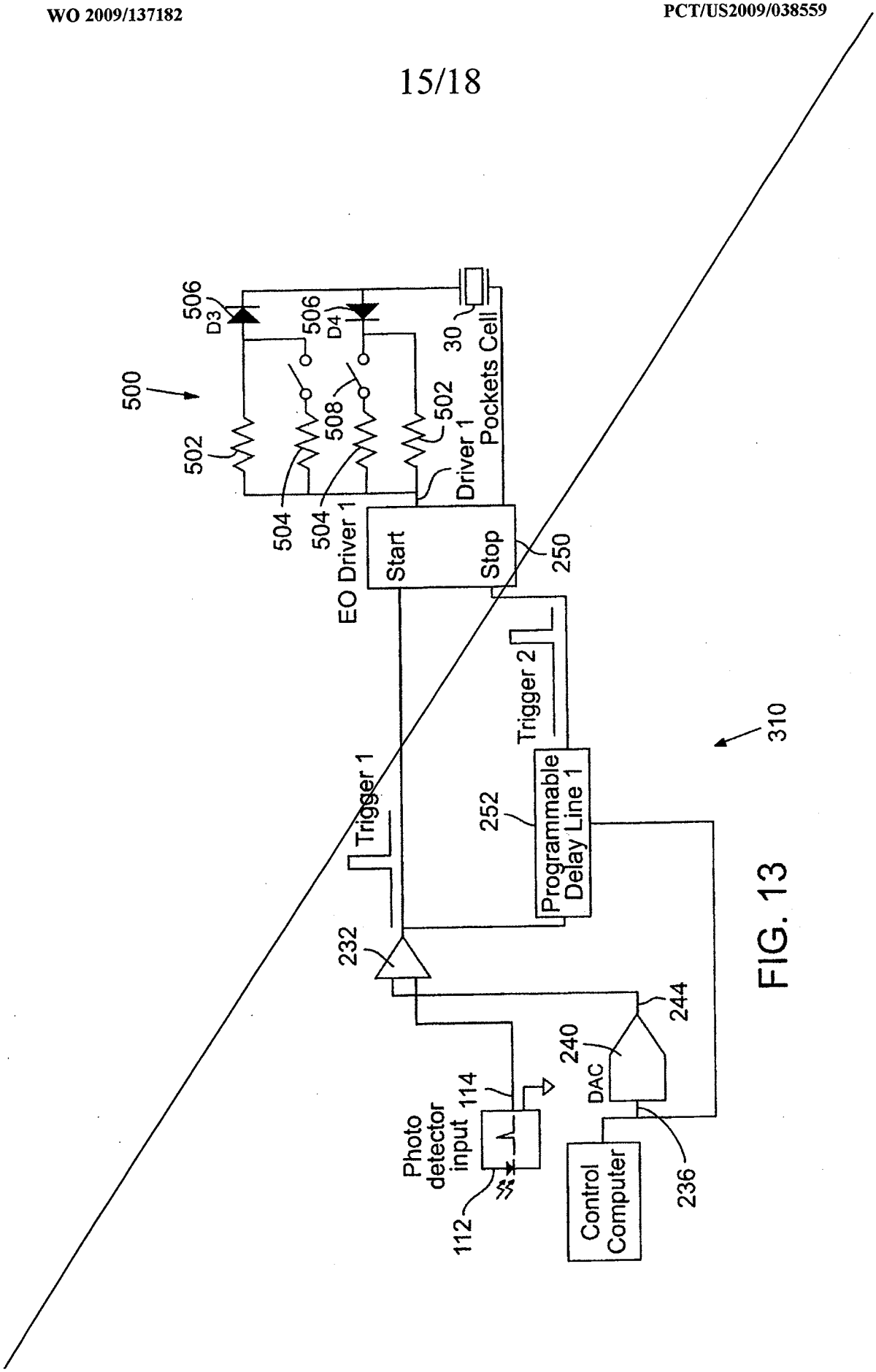
500
502
506
D3
506
D4
508
502
30
Pockets Cell
Driver 1
504
504
EO Driver 1
Start
Stop
250
Trigger 2
Trigger 1
252
Programmable Delay Line 1
310
232
244
240
DAC
Photo detector input
114
112
Control Computer
236

FIG. 13

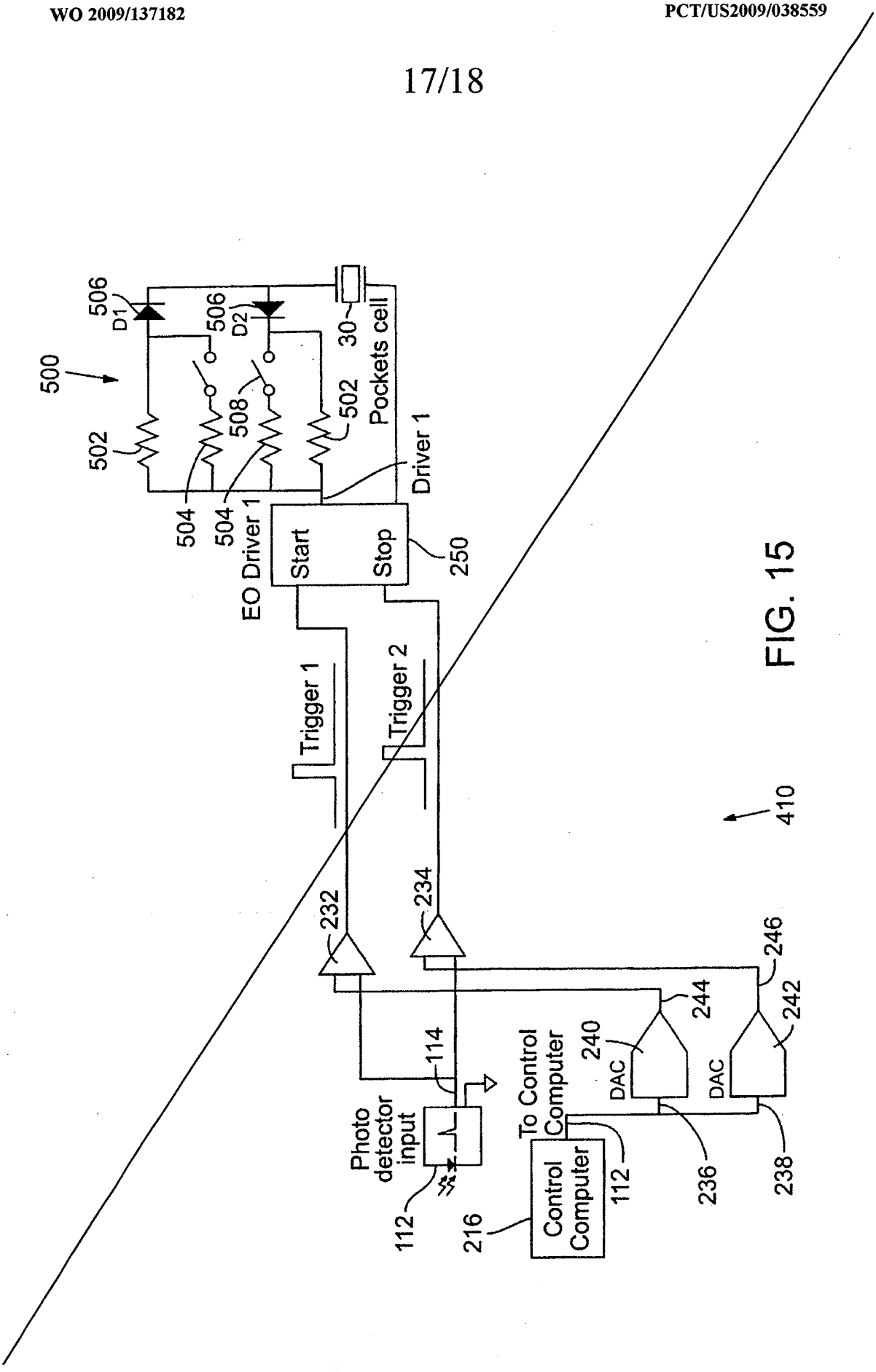
500
502
506
D1
506
D2
30
Pockets cell
502
508
502
504
504
Driver 1
EO Driver 1
Start
Stop
250
Trigger 1
Trigger 2
410
232
234
246
244
242
240
DAC
DAC
114
To Control Computer
Photo detector input
112
216
Control Computer
112
236
238

FIG. 15

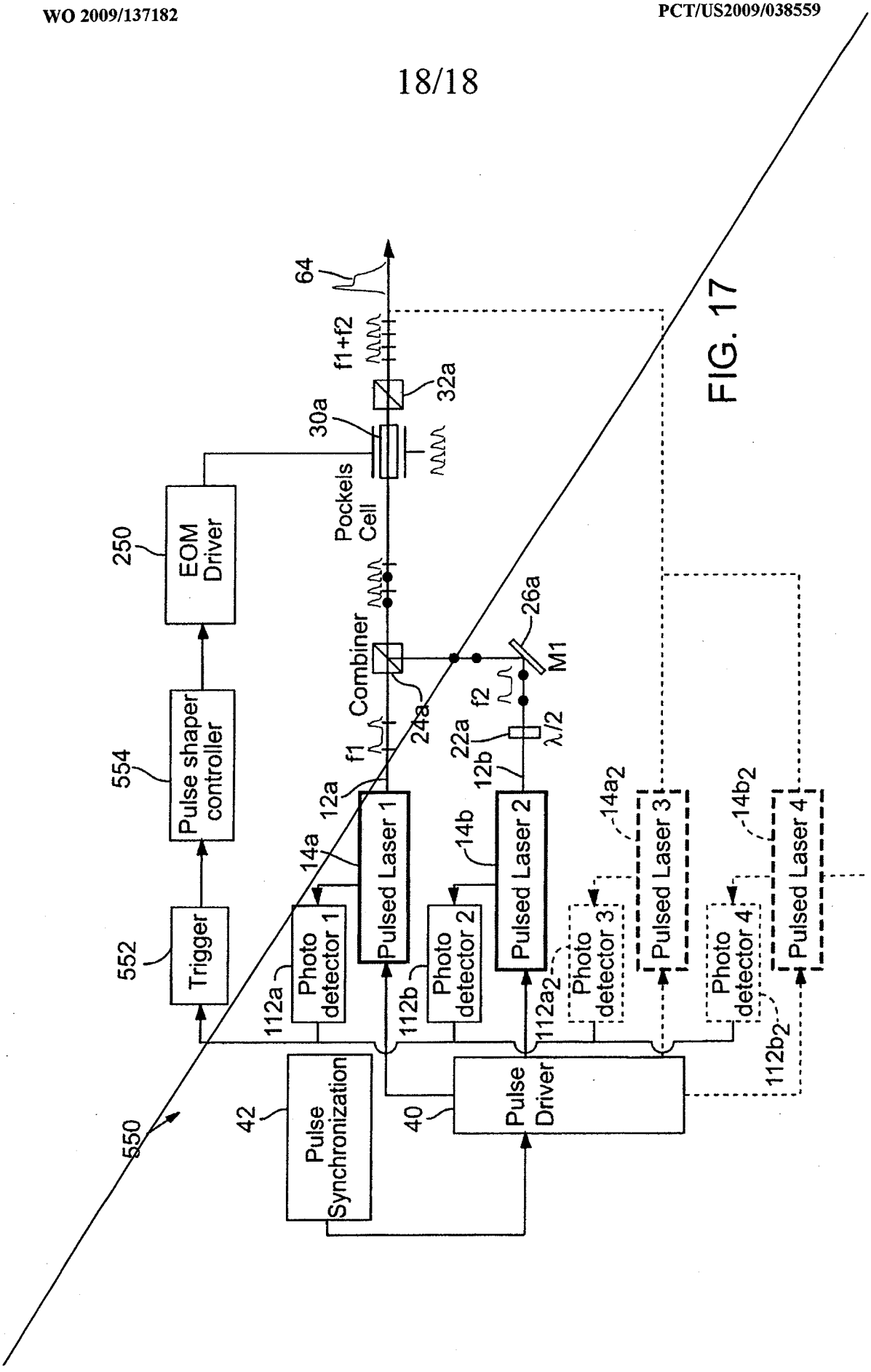
550
552
Trigger
554
Pulse shaper controller
250
EOM Driver
42
Pulse Synchronization
40
Pulse Driver
64
f1+f2
32a
30a
Pockels Cell
Combiner
f1
f2
24a
26a
M1
λ/2
22a
12a
12b
Pulsed Laser 1
Pulsed Laser 2
Pulsed Laser 3
Pulsed Laser 4
14a
14b
14a2
14b2
Photo detector 1
Photo detector 2
Photo detector 3
Photo detector 4
112a
112b
112a2
112b2

FIG. 17

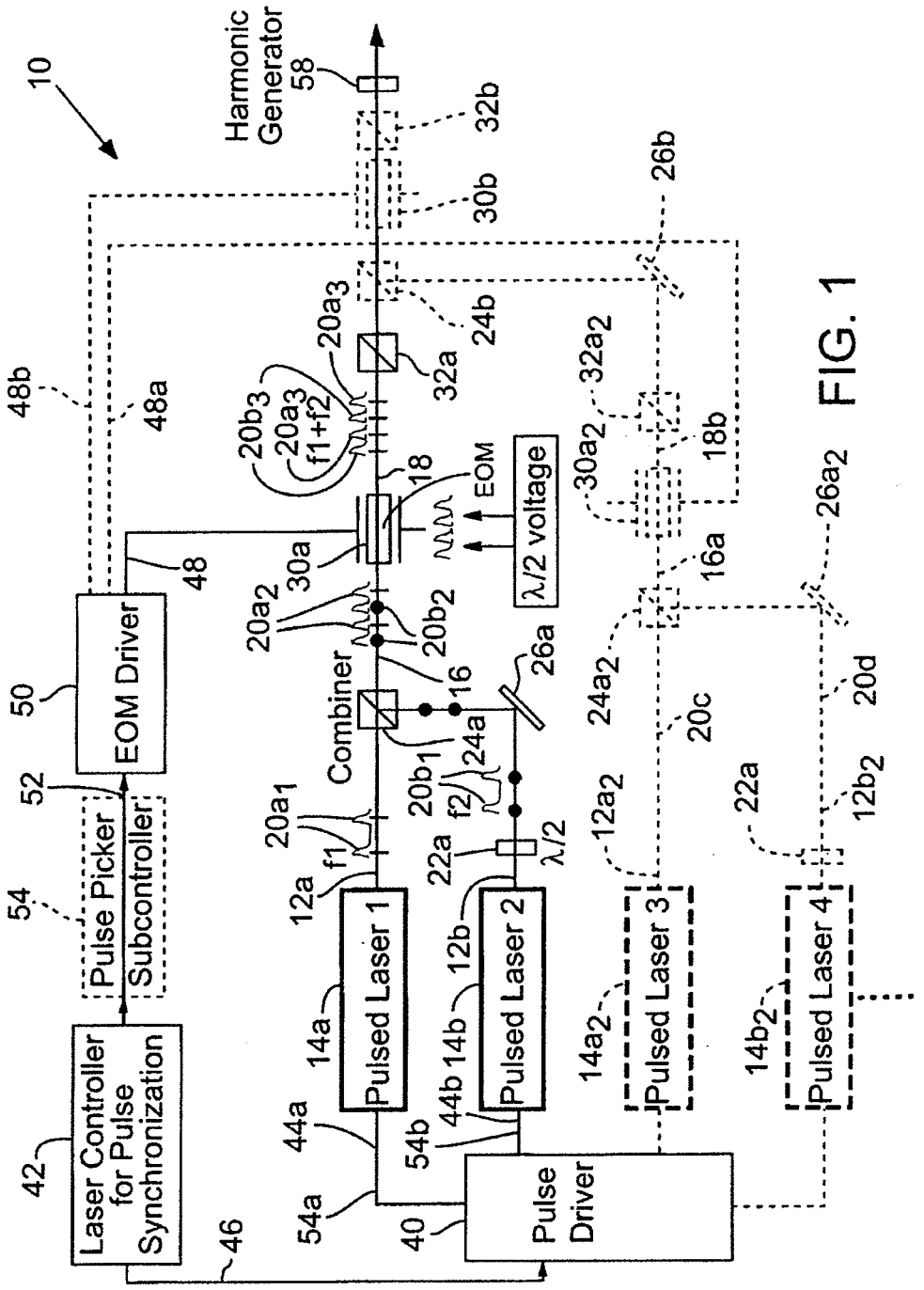
10
Harmonic Generator
58
32b
30b
26b
48b
48a
20a3
20b3
20a3
f1+f2
32a
24b
32a2
30a2
18b
18
EOM
λ/2 voltage
48
30a
20a2
20b2
16a
26a2
50
EOM Driver
Combiner
16
26a
24a2
20c
20d
52
Pulse Picker
Subcontroller
20a1
20b1
f2
24a
λ/2
22a
12a2
12b2
54
f1
12a
22a
λ/2
Pulsed Laser 1
Pulsed Laser 2
Pulsed Laser 3
Pulsed Laser 4
12b
14a
14b
14a2
14b2
42
Laser Controller for Pulse Synchronization
44a
44b
54b
54a
40
Pulse Driver
46

FIG. 1

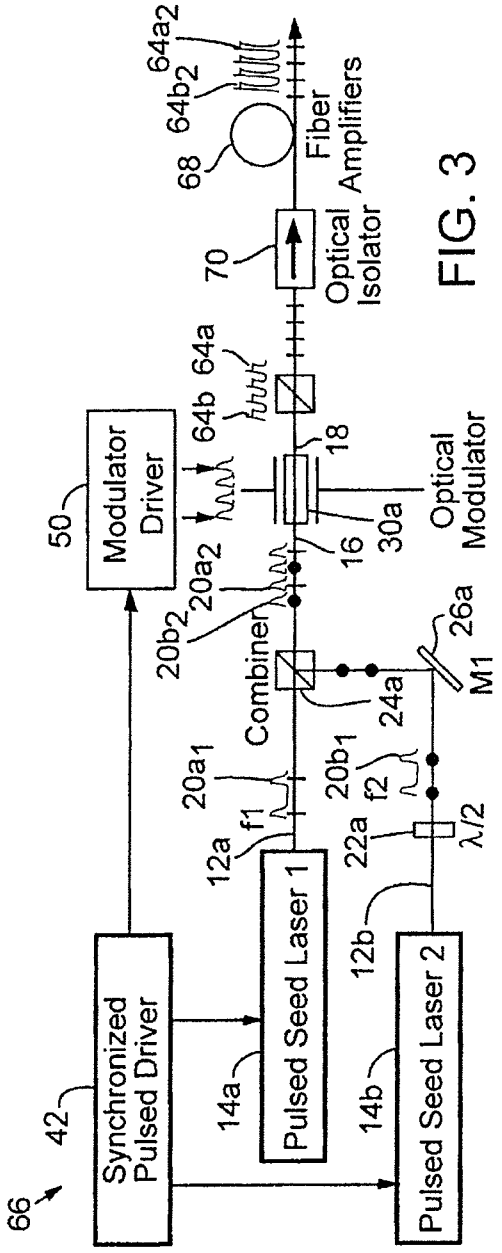
66
42
Synchronized Pulsed Driver
14a
Pulsed Seed Laser 1
14b
Pulsed Seed Laser 2
12a
12b
f1
f2
20a1
20b1
22a
λ/2
24a
Combiner
20a2
20b2
26a
M1
50
Modulator Driver
64a
64b
18
16
30a
Optical Modulator
70
Optical Isolator
68
64a2
64b2
Fiber Amplifiers

FIG. 3

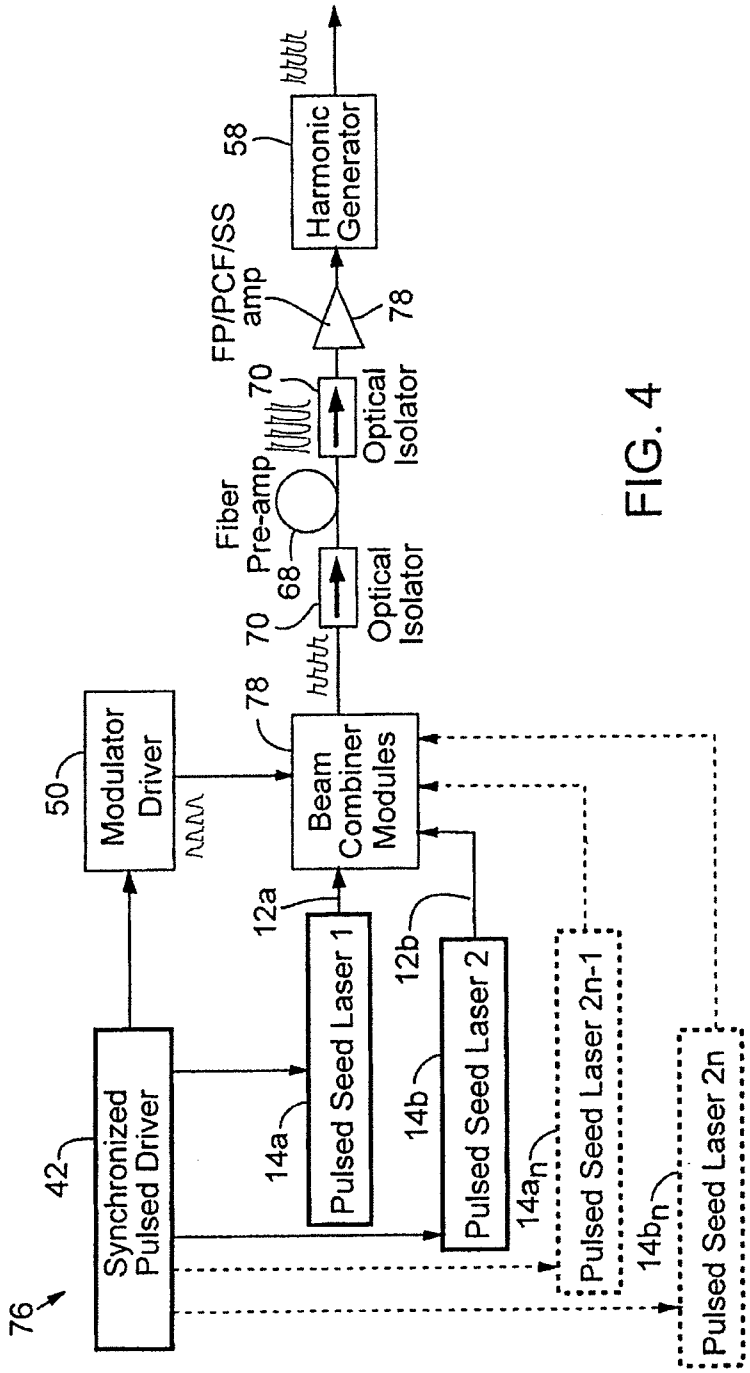
Harmonic Generator
58
FP/PCF/SS amp
78
Optical Isolator
70
Fiber Pre-amp
68
Optical Isolator
70
Beam Combiner Modules
78
Modulator Driver
50
12a
12b
Pulsed Seed Laser 1
Pulsed Seed Laser 2
Pulsed Seed Laser 2n-1
Pulsed Seed Laser 2n
14a
14b
14an
14bn
Synchronized Pulsed Driver
42
76

FIG. 4

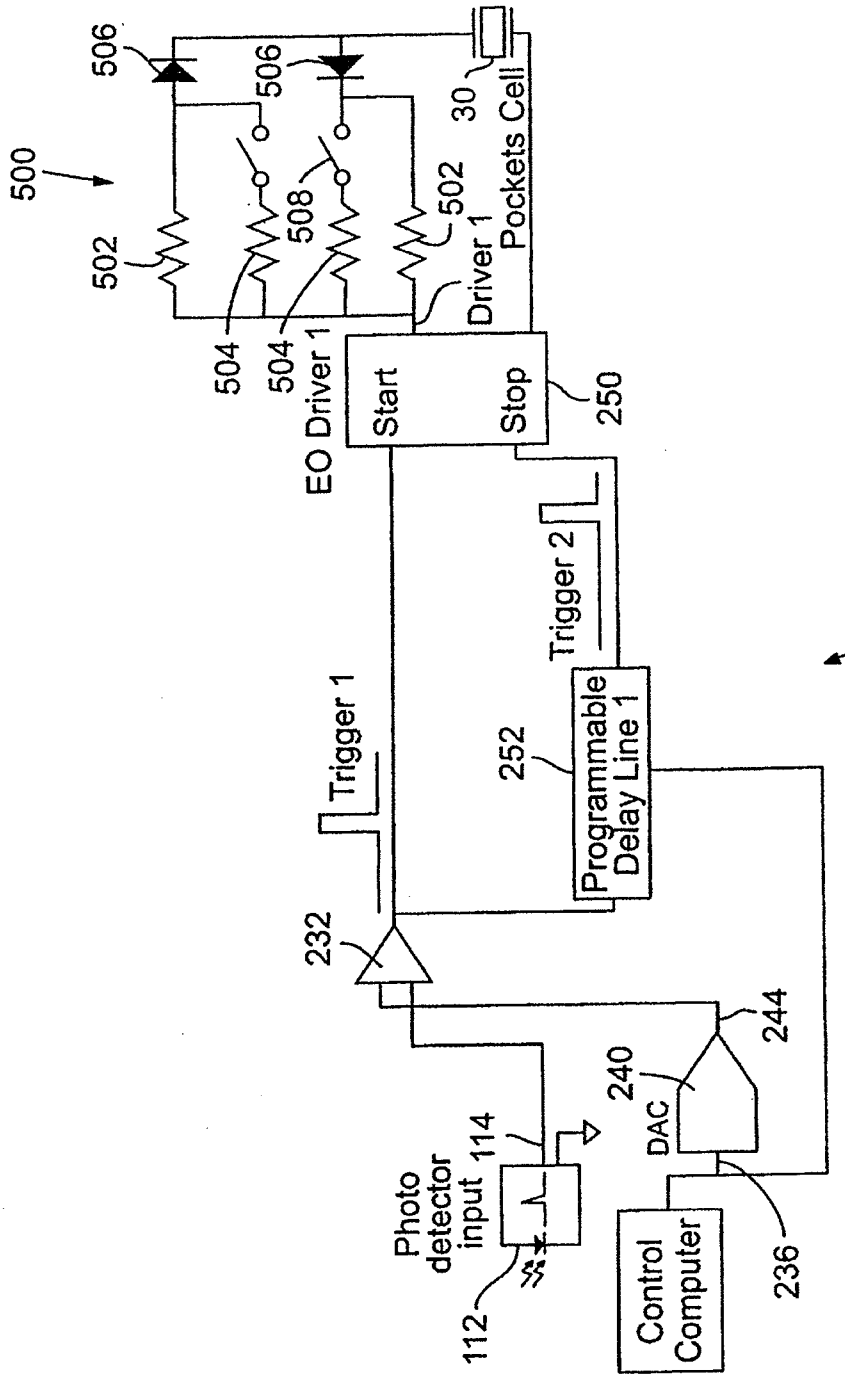
500
502
506
506
508
502
30
Pockets Cell
Driver 1
504
504
EO Driver 1
Start
Stop
250
Trigger 2
Trigger 1
252
Programmable Delay Line 1
310
232
244
240
DAC
Photo detector input
114
112
Control Computer
236

FIG. 13

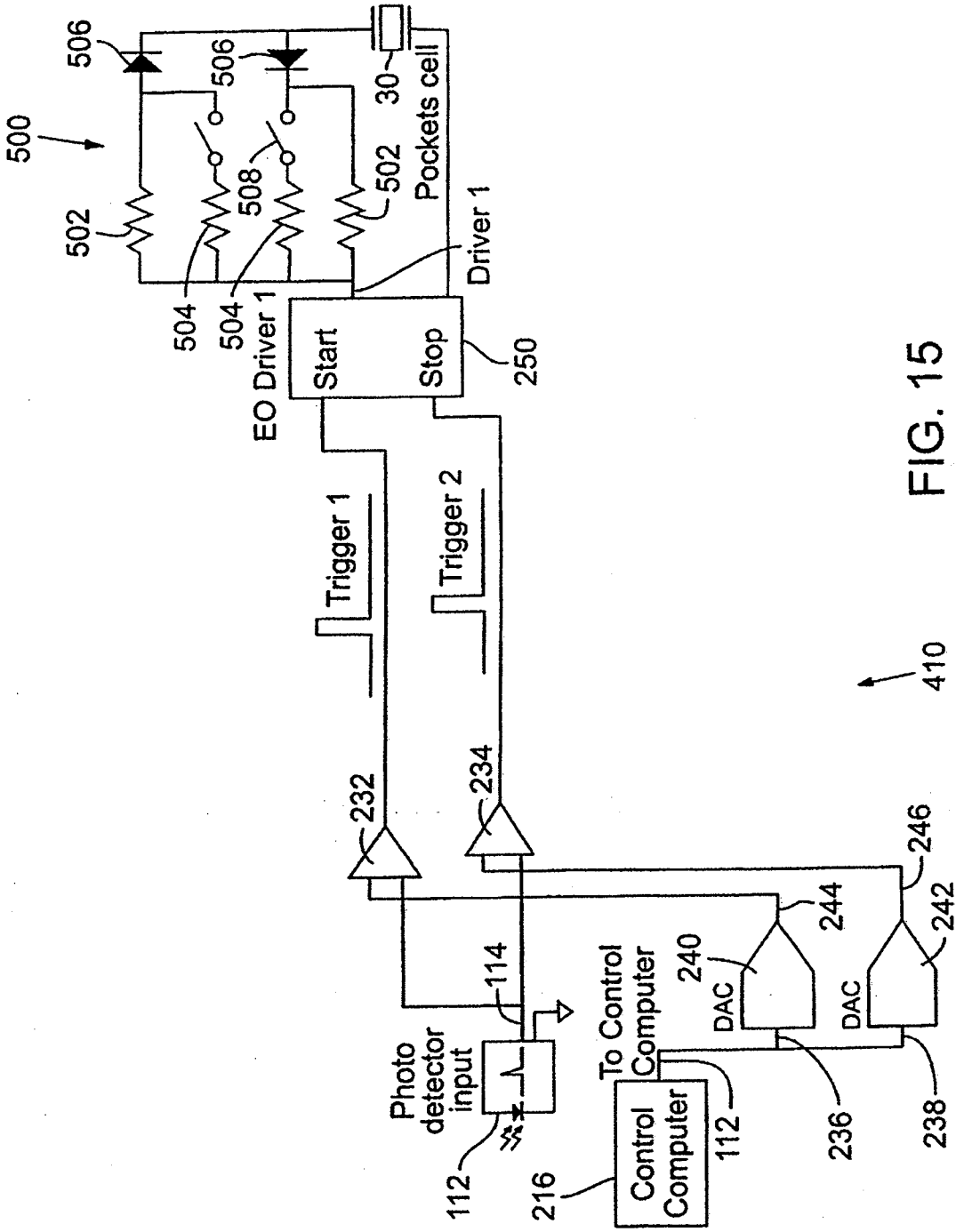
500
506
506
30
Pockets cell
502
502
508
504
504
Driver 1
EO Driver 1
Start
Stop
250
Trigger 1
Trigger 2
232
234
410
246
244
242
240
DAC
DAC
114
To Control Computer
Photo detector input
112
216
Control Computer
112
236
238

FIG. 15

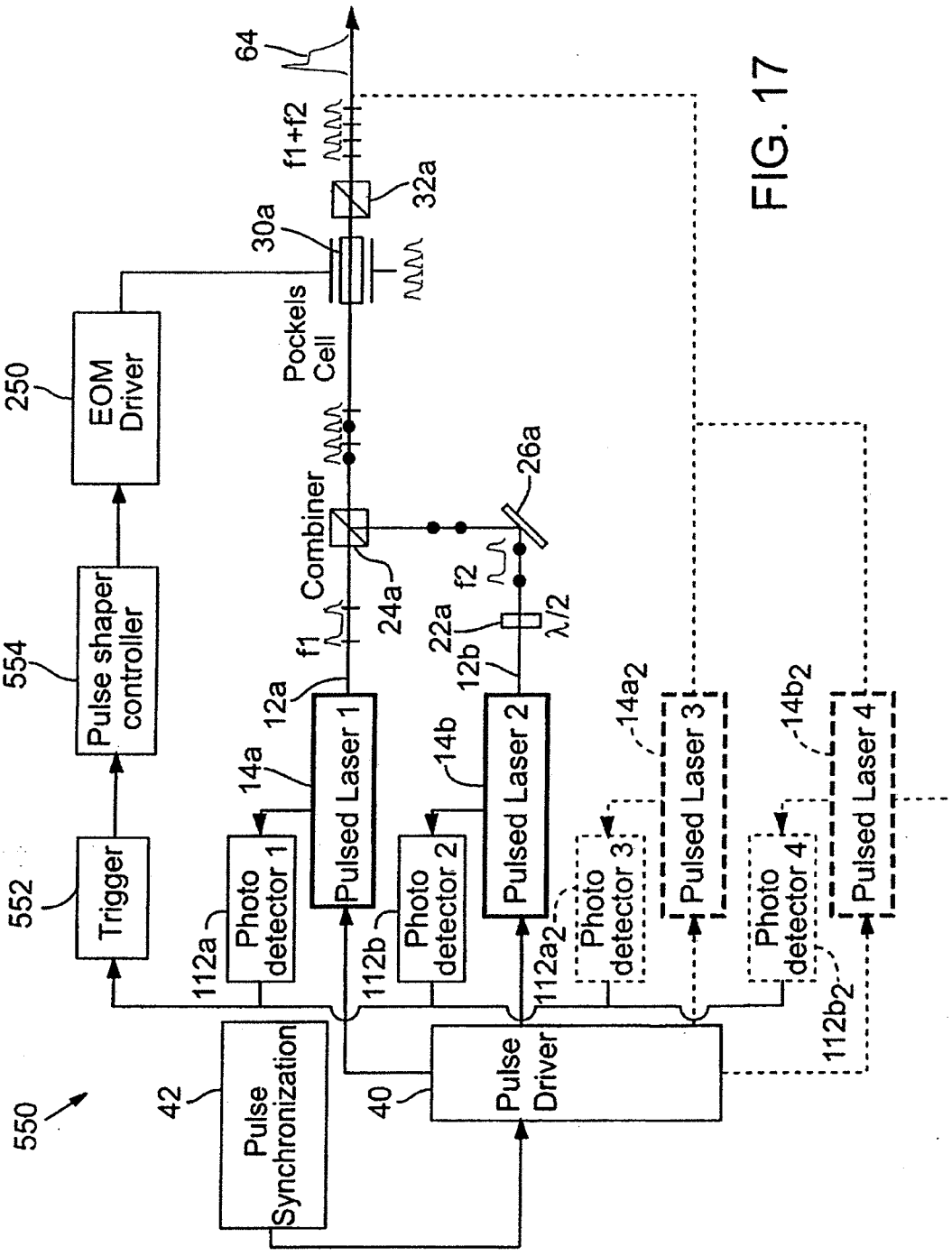
550
552
Trigger
554
Pulse shaper controller
250
EOM Driver
42
Pulse Synchronization
40
Pulse Driver
64
f1+f2
32a
30a
Pockels Cell
Combiner
24a
f1
f2
26a
22a
λ/2
12a
12b
14a
14b
Pulsed Laser 1
Pulsed Laser 2
Pulsed Laser 3
Pulsed Laser 4
14a2
14b2
Photo detector 1
Photo detector 2
Photo detector 3
Photo detector 4
112a
112b
112a2
112b2

FIG. 17