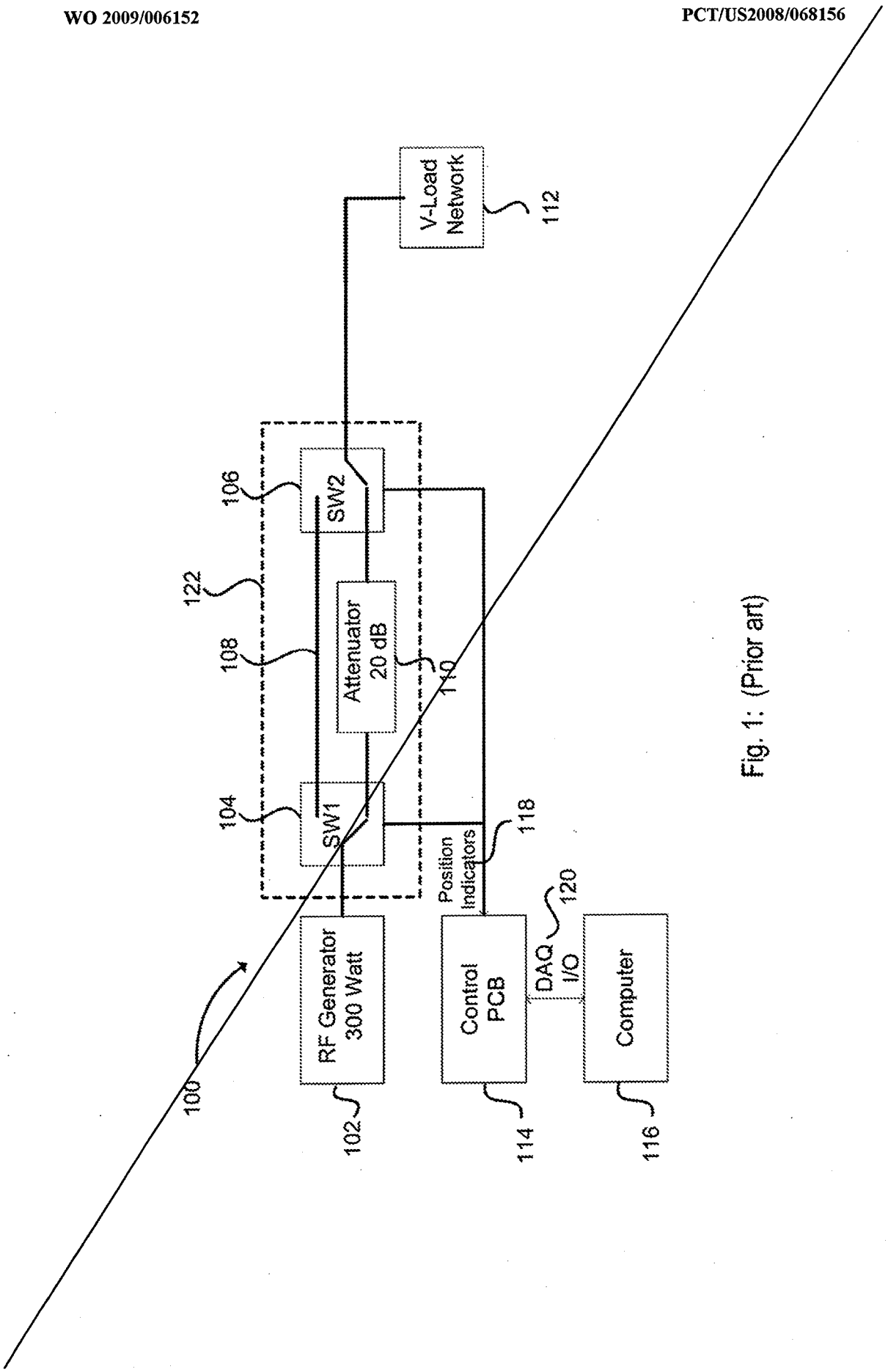


Fig. 1: (Prior art)

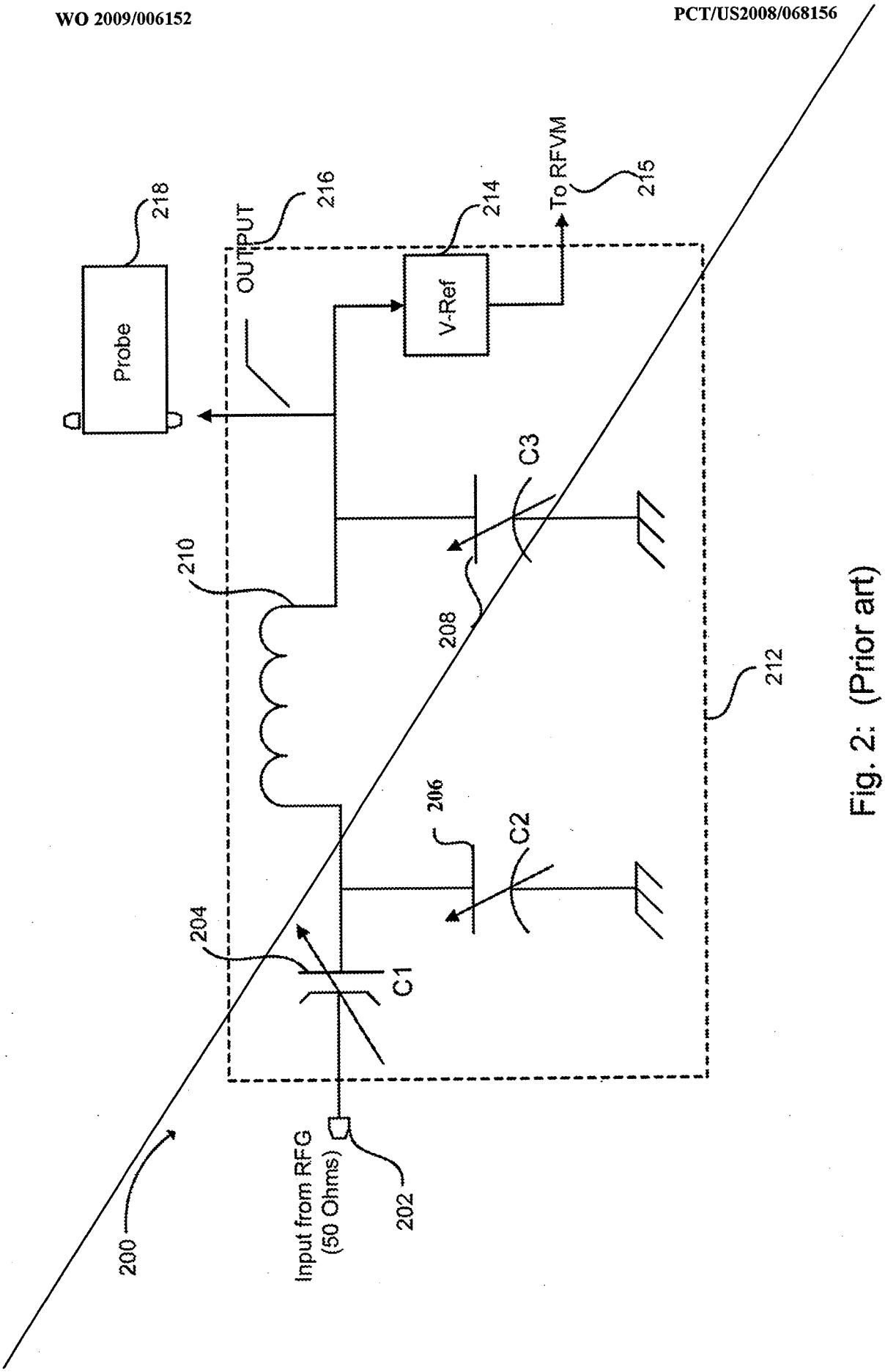


Fig. 2: (Prior art)

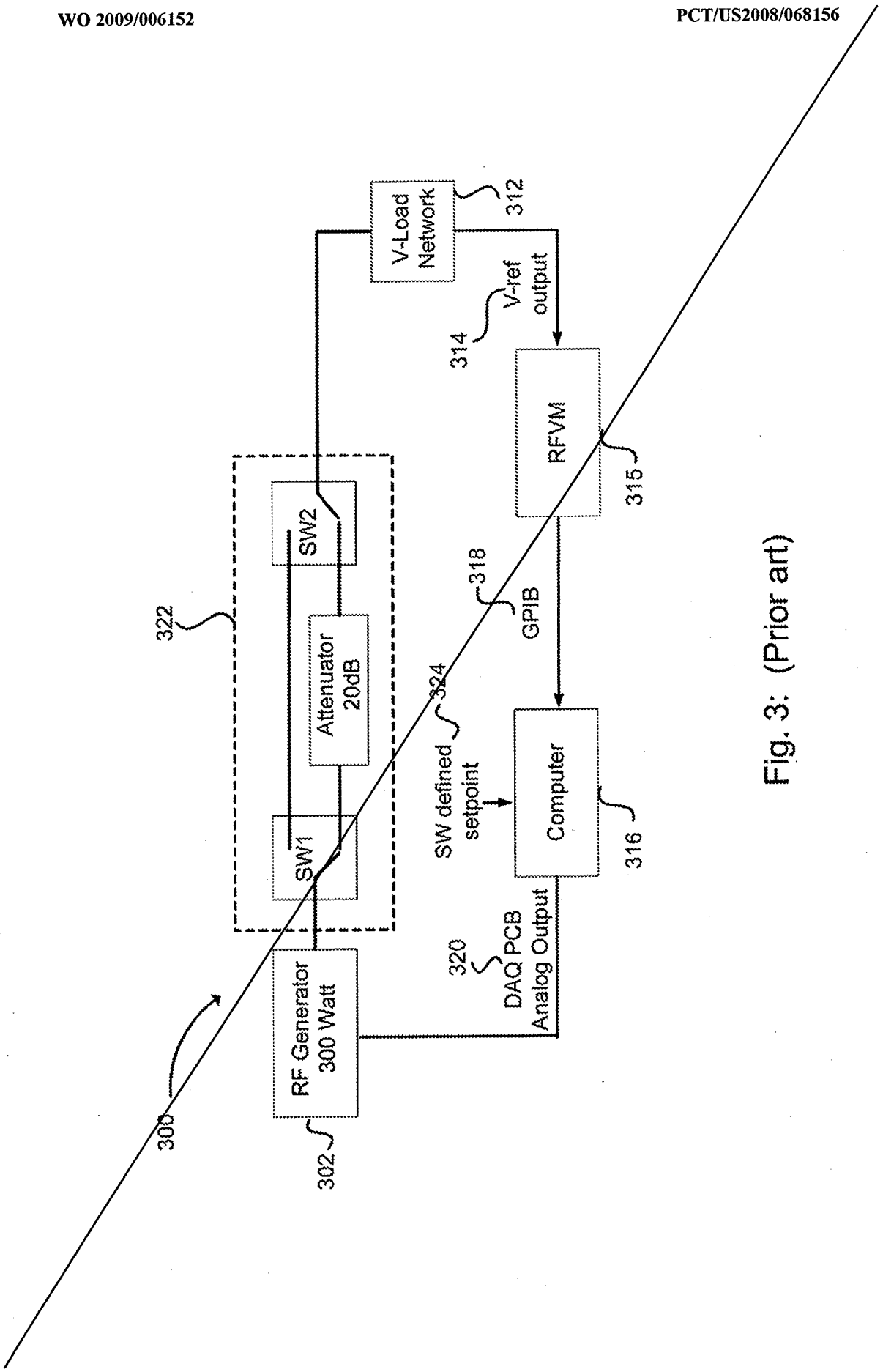


Fig. 3: (Prior art)

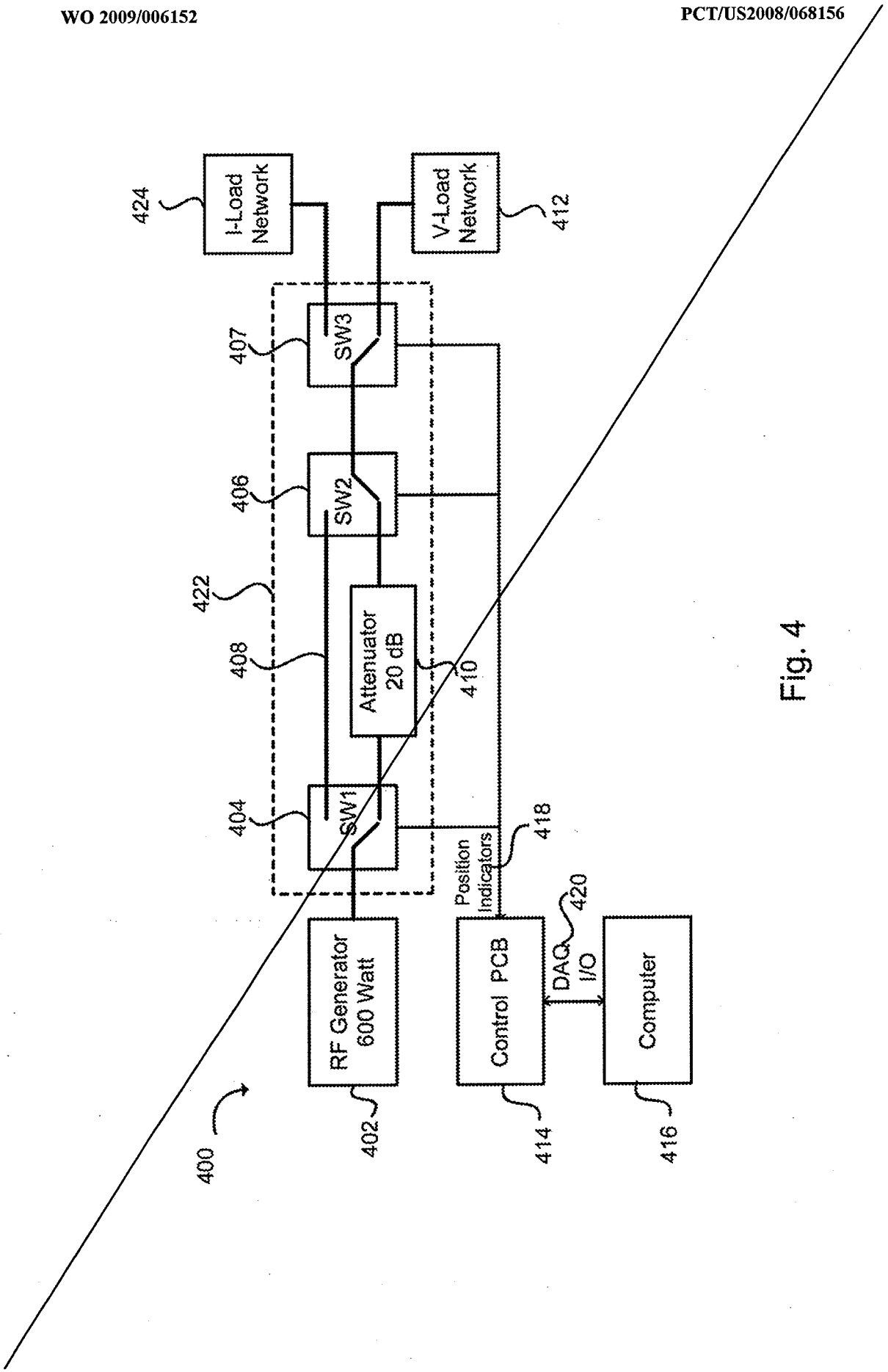

I-Load Network
V-Load Network
424
412
407
406
422
408
404
SW3
SW2
SW1
Attenuator 20 dB
410
Position Indicators
418
420
DAQ
I/O
RF Generator 600 Watt
Control PCB
Computer
402
414
416
400

Fig. 4

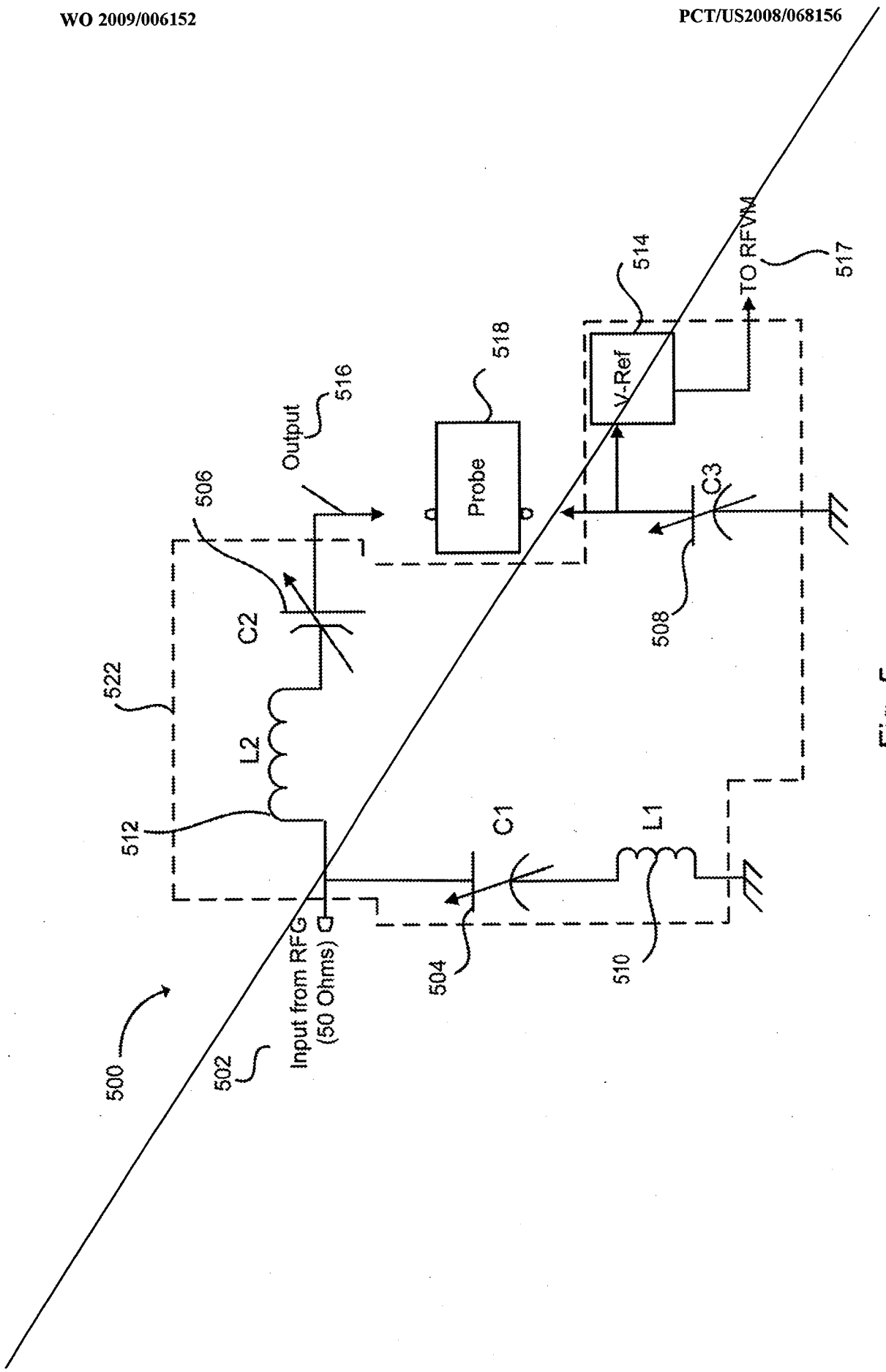

500
502
Input from RFG
(50 Ohms)
504
C1
L1
510
512
L2
522
C2
506
Output
516
518
Probe
514
V-Ref
TO RFVM
517
C3
508

Fig. 5

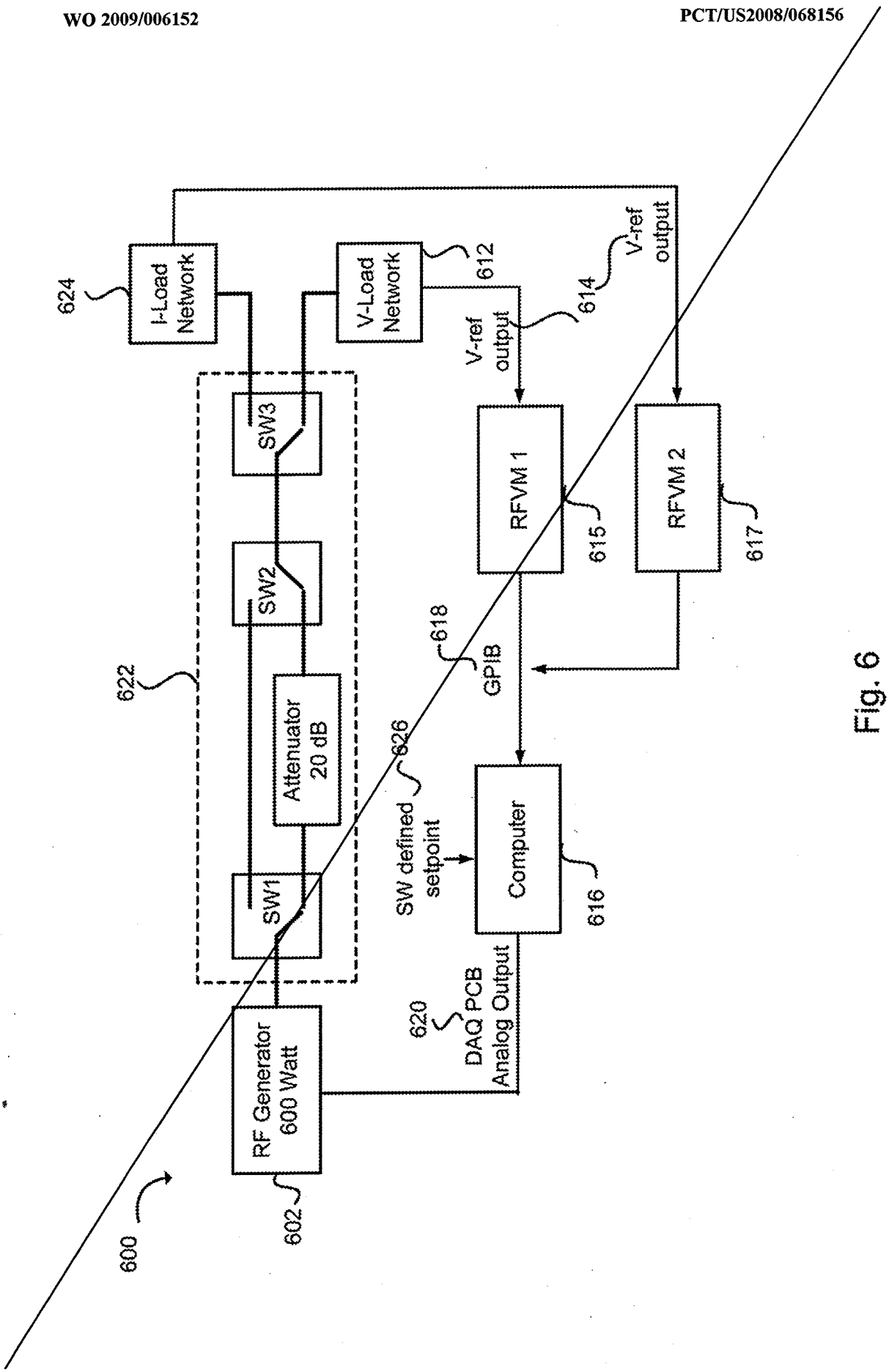

600
602
RF Generator 600 Watt
620
DAQ PCB Analog Output
622
SW1
SW2
SW3
Attenuator 20 dB
624
I-Load Network
V-Load Network
612
V-ref output
614
V-ref output
RFVM 1
615
RFVM 2
617
618
GPIB
626
SW defined setpoint
Computer
616

Fig. 6

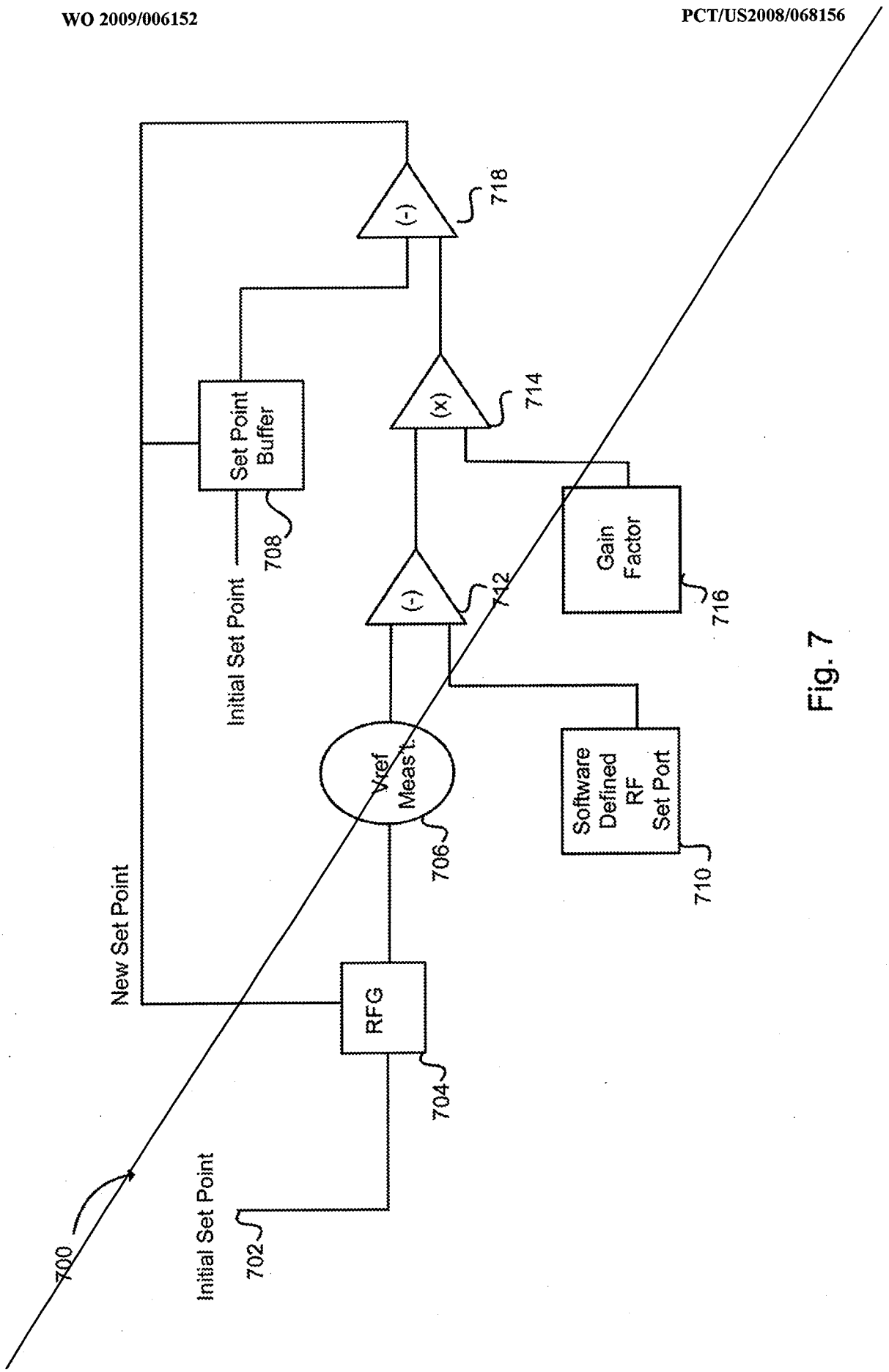

700
Initial Set Point
702
RFG
704
Vref Meas't.
706
New Set Point
Initial Set Point
708
Set Point Buffer
(-)
712
(x)
714
Gain Factor
716
(-)
718
Software Defined RF Set Port
710

Fig. 7

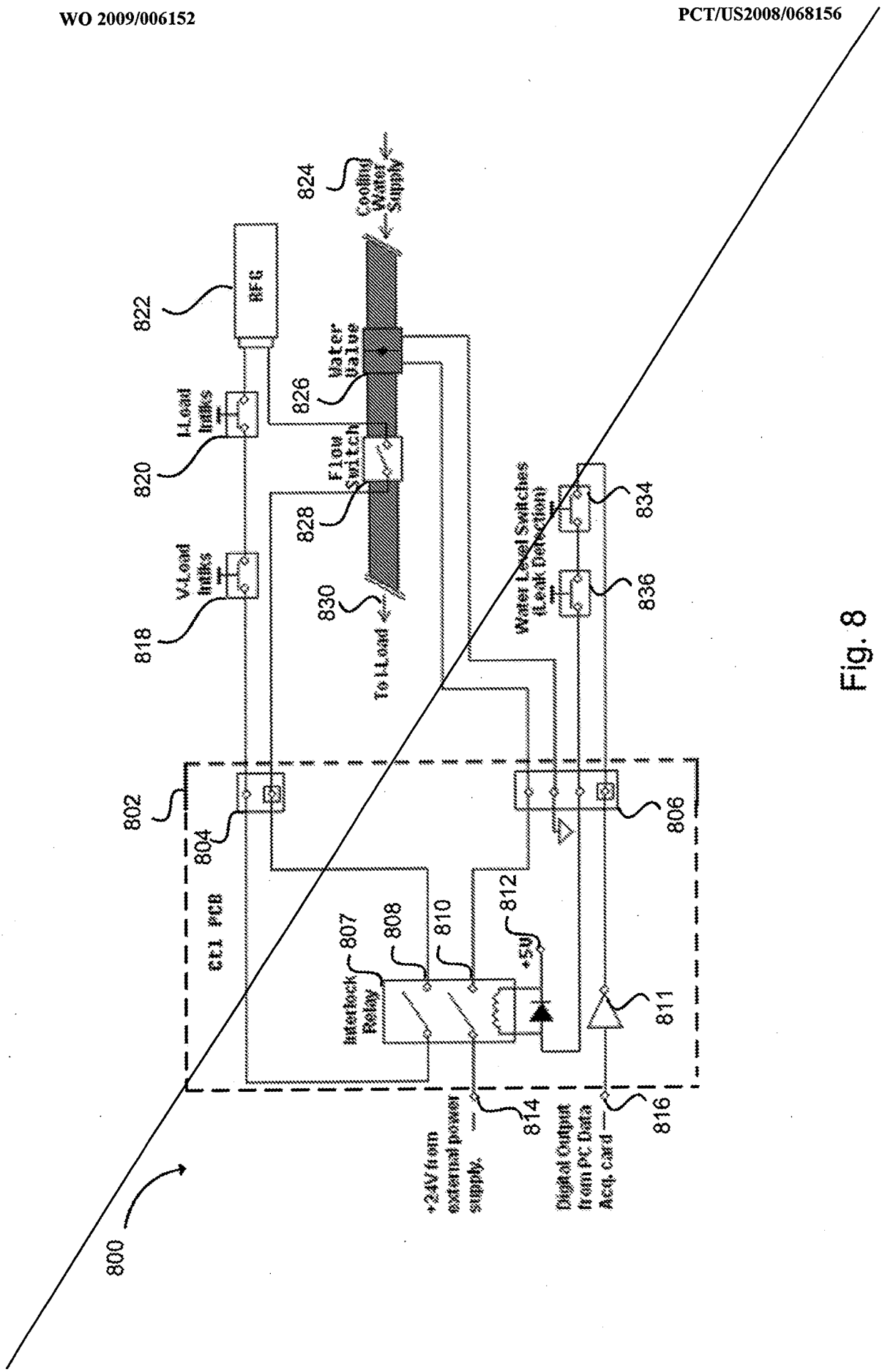

800
802
804
Ctl PCB
806
807
808
Interlock Relay
810
812
+5V
811
814
+24V from external power supply
816
Digital Output from PC Data Acq. card
818
V-Load Inlets
820
I-Load Inlets
822
RFG
824
Cooling Water Supply
826
Water Valve
828
Flow Switch
830
To I-Load
834
Water Level Switches (Leak Detection)
836

Fig. 8

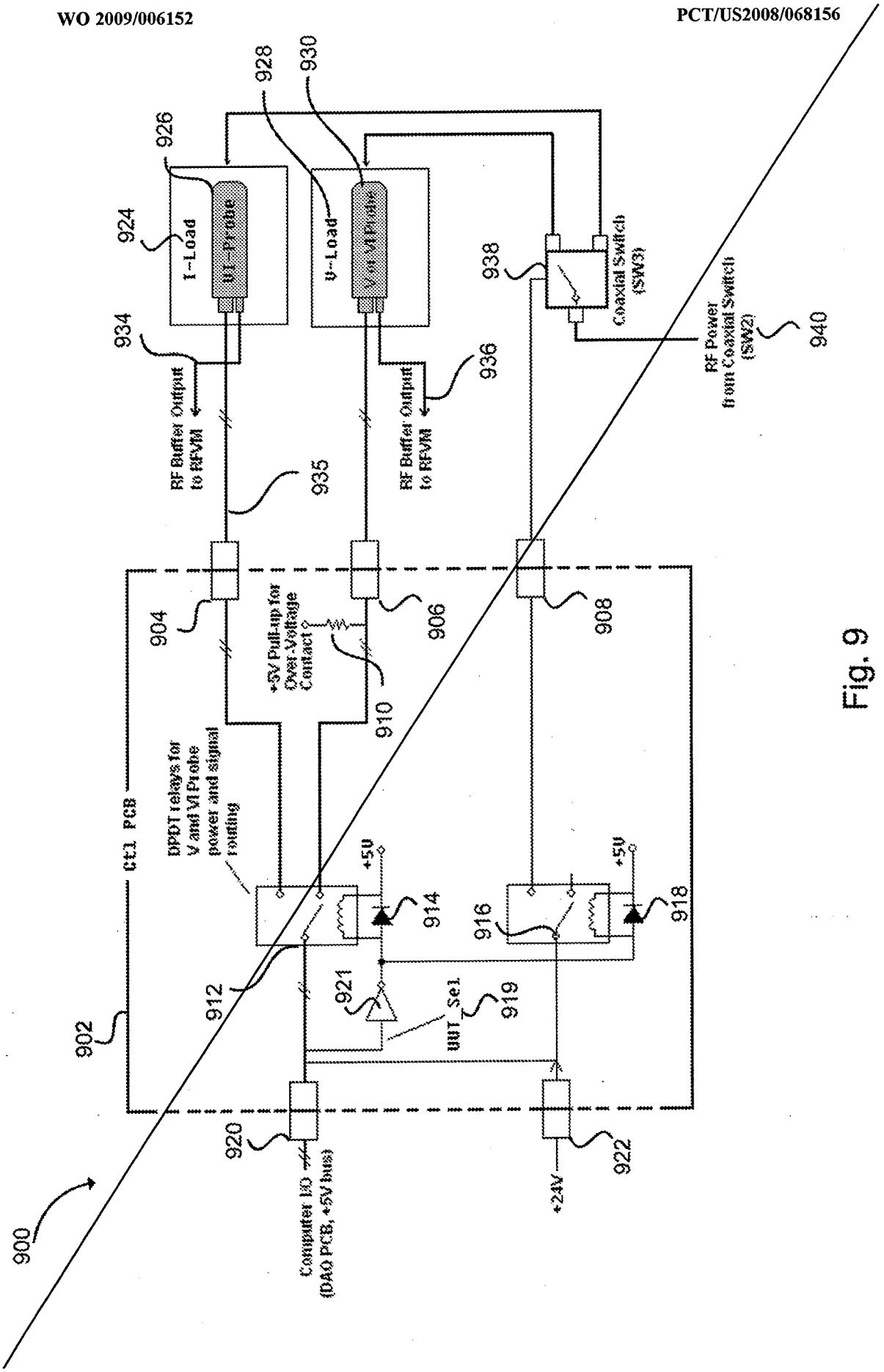

900
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904
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910
912
914
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918
919
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921
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924
926
928
930
934
935
936
938
940
I-Load
UT Probe
V-Load
V or VI Probe
Coaxial Switch (SW3)
RF Power from Coaxial Switch (SW2)
RF Buffer Output to RFVM
RF Buffer Output to RFVM
+5V Pull-up for Over-Voltage Contact
DPDT relays for V and VI Probe power and signal routing
CE1 PCB
+5V
+5V
UUT Sel.
Computer I/O (DAQ PCB, +5V bus)
+24V

Fig. 9

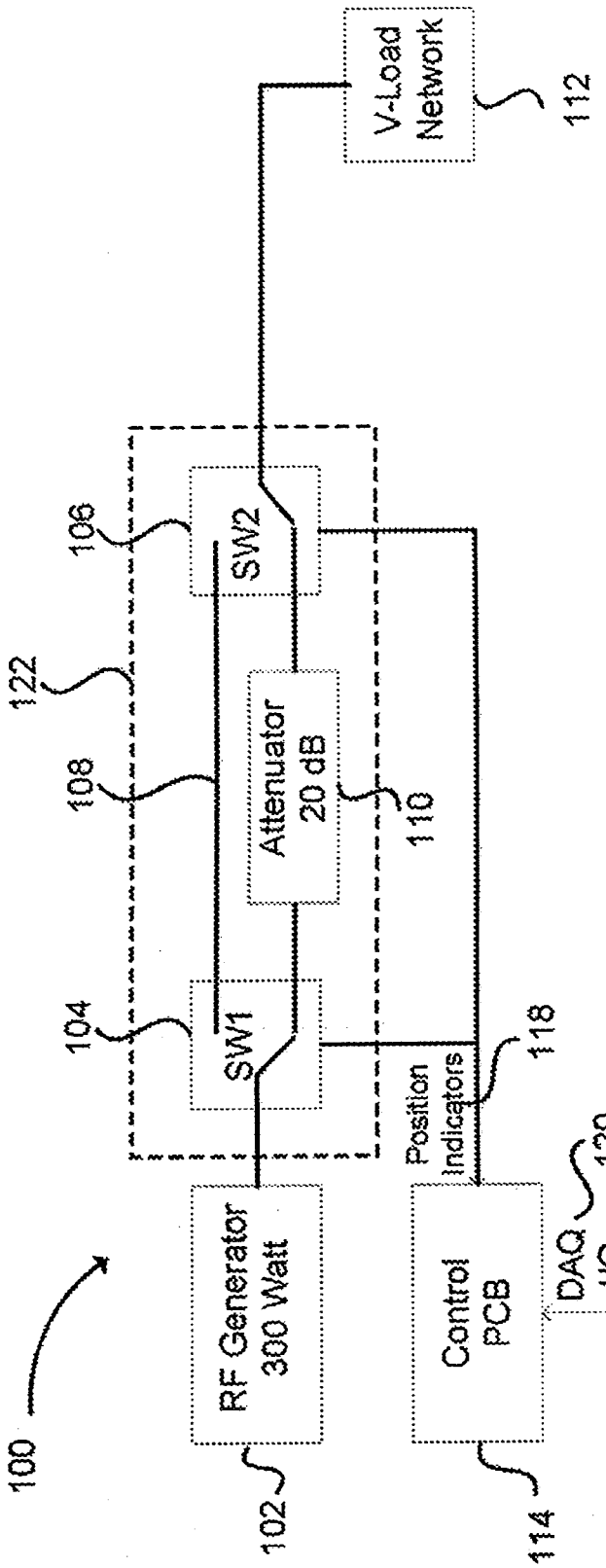


Fig. 1: (Prior art)

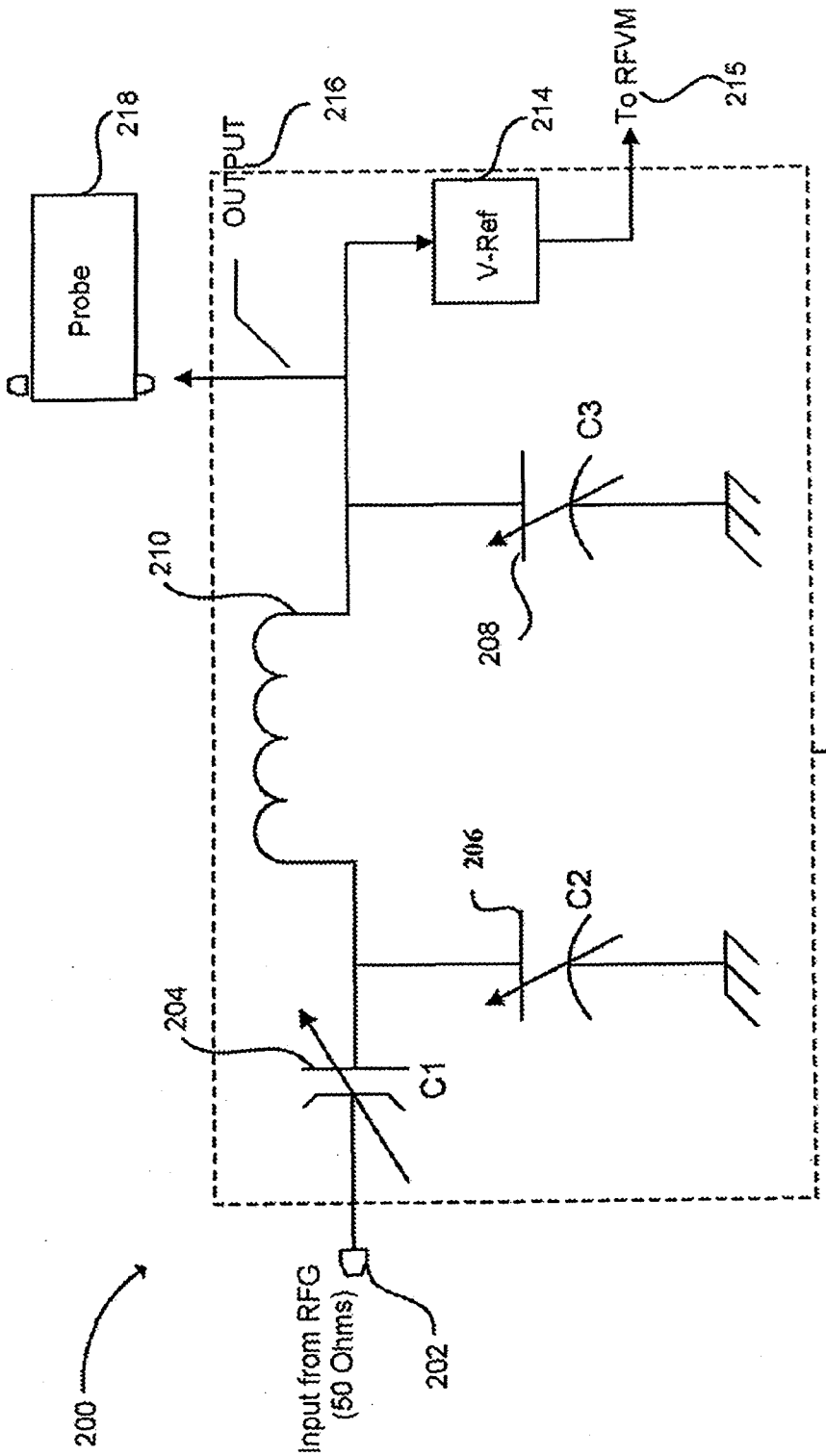


Fig. 2: (Prior art)

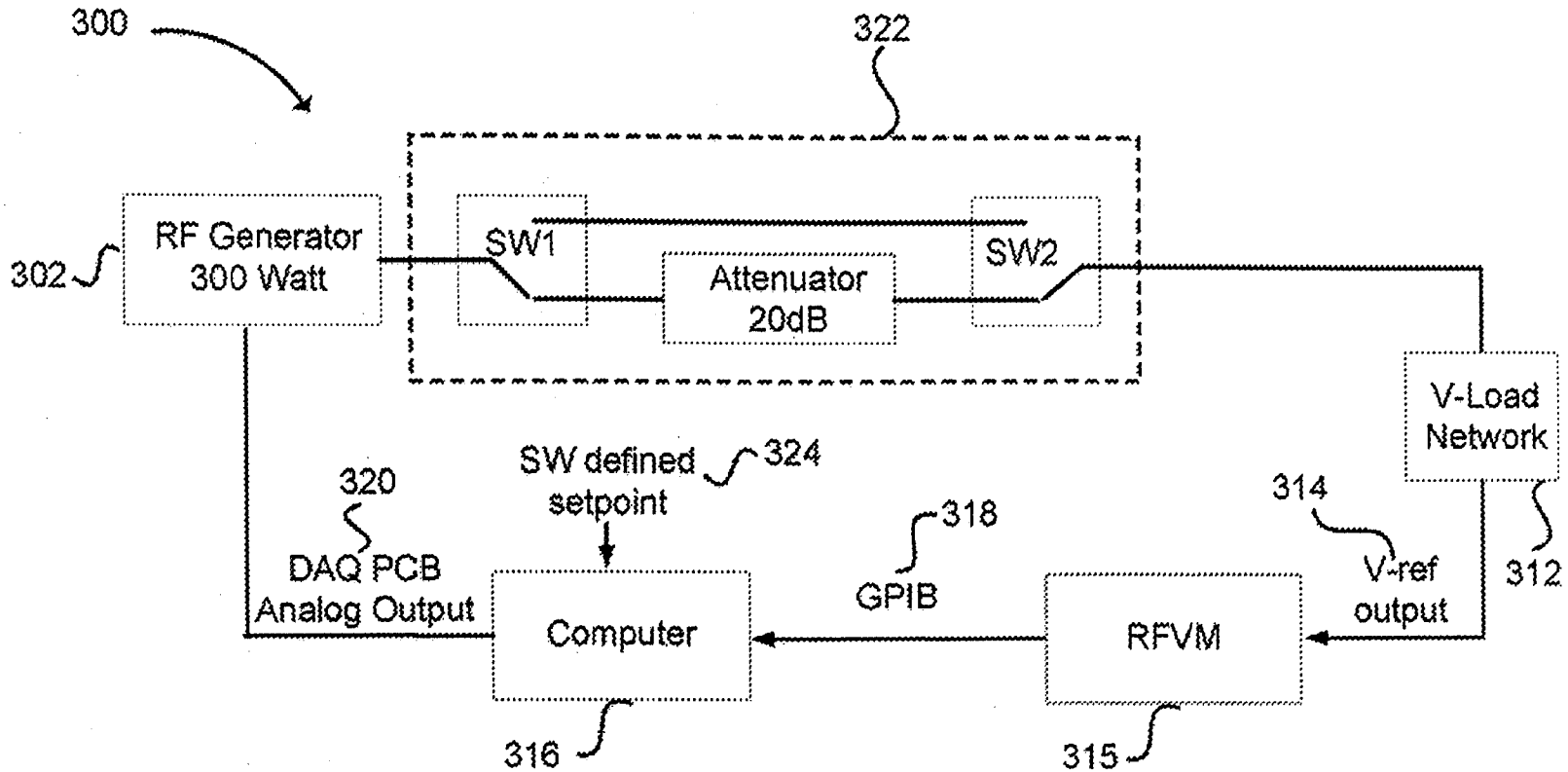


Fig. 3: (Prior art)

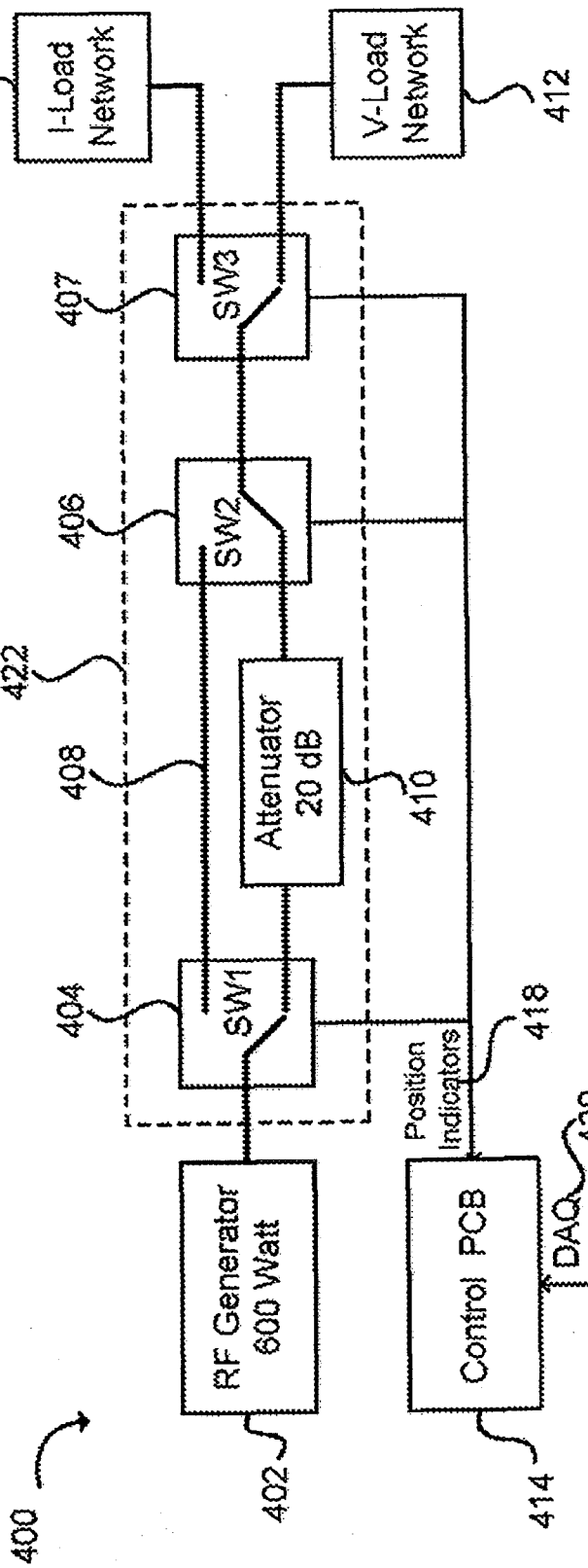

400
RF Generator 600 Watt
402
SW1
404
SW2
406
SW3
407
Attenuator 20 dB
408
410
422
I-Load Network
424
V-Load Network
412
Position Indicators
418
Control PCB
414
DAQ
I/O
420
Computer
416

Fig. 4

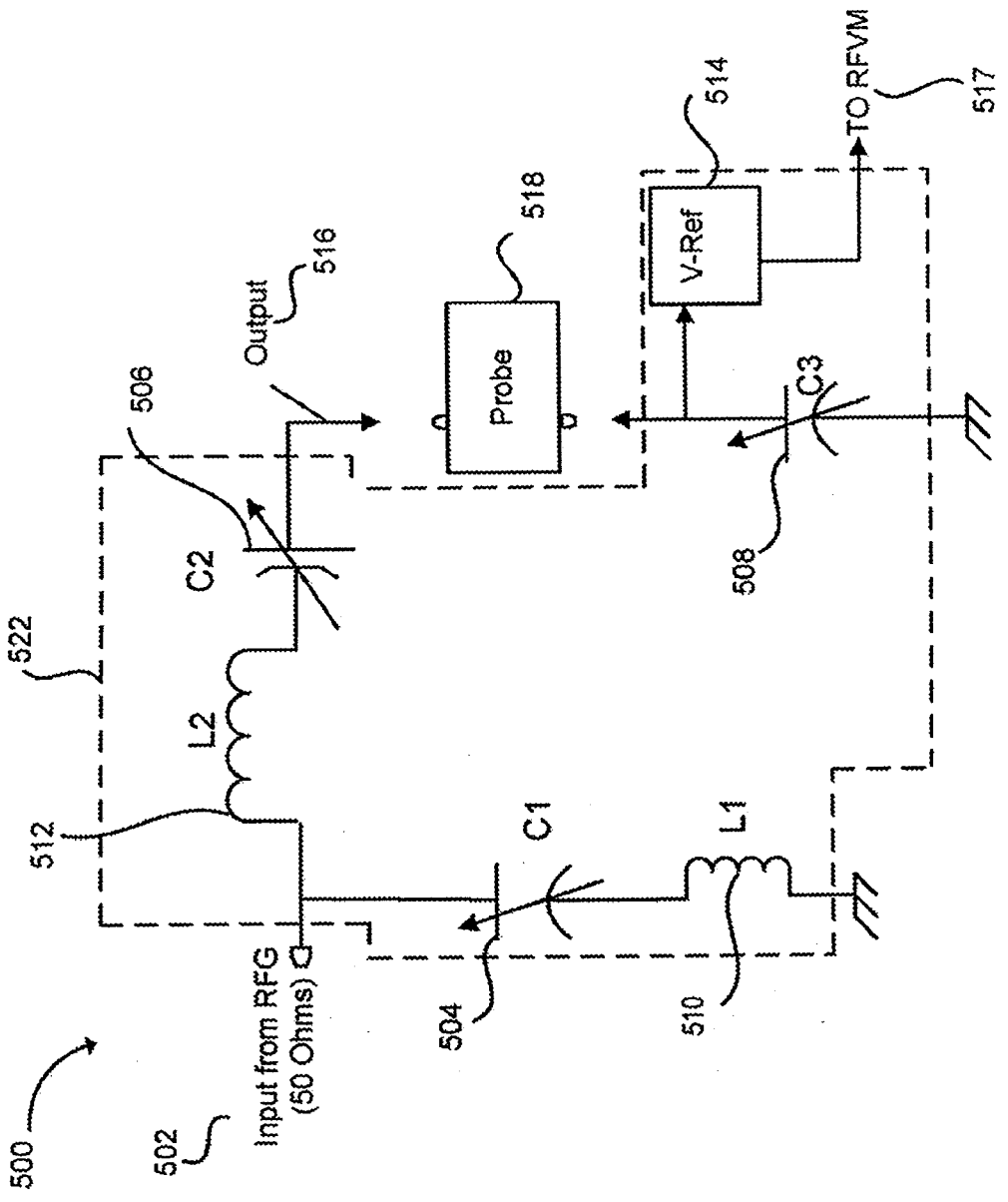

500
502
Input from RFG
(50 Ohms)
504
506
508
510
512
514
516
517
518
522
C1
C2
C3
L1
L2
Output
Probe
V-Ref
TO RFVM

Fig. 5

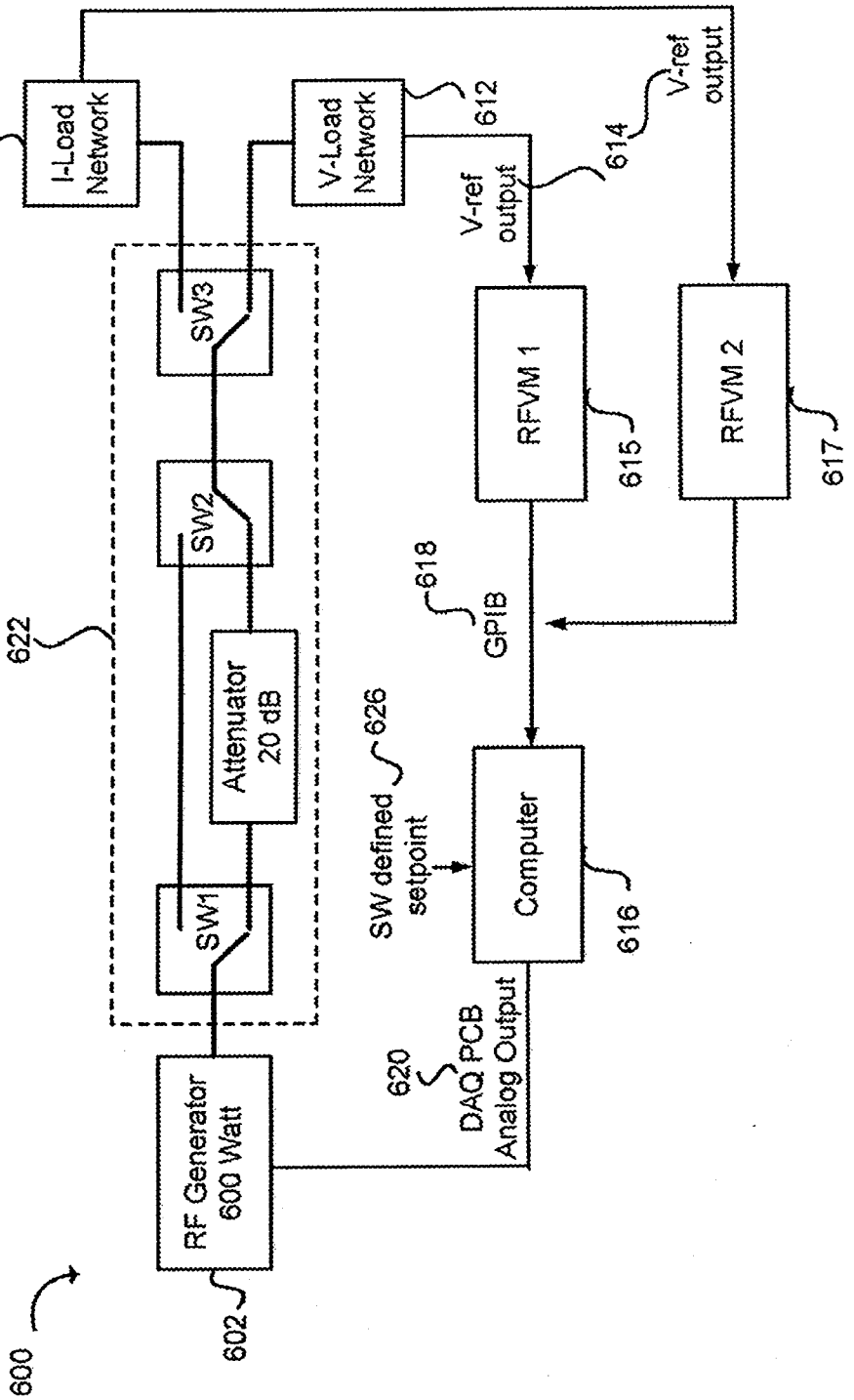

600
602
RF Generator
600 Watt
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SW1
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SW3
Attenuator
20 dB
624
I-Load
Network
V-Load
Network
612
V-ref
output
614
V-ref
output
RFVM 1
615
RFVM 2
617
618
GPIB
626
SW defined
setpoint
Computer
616
620
DAQ PCB
Analog Output

Fig. 6

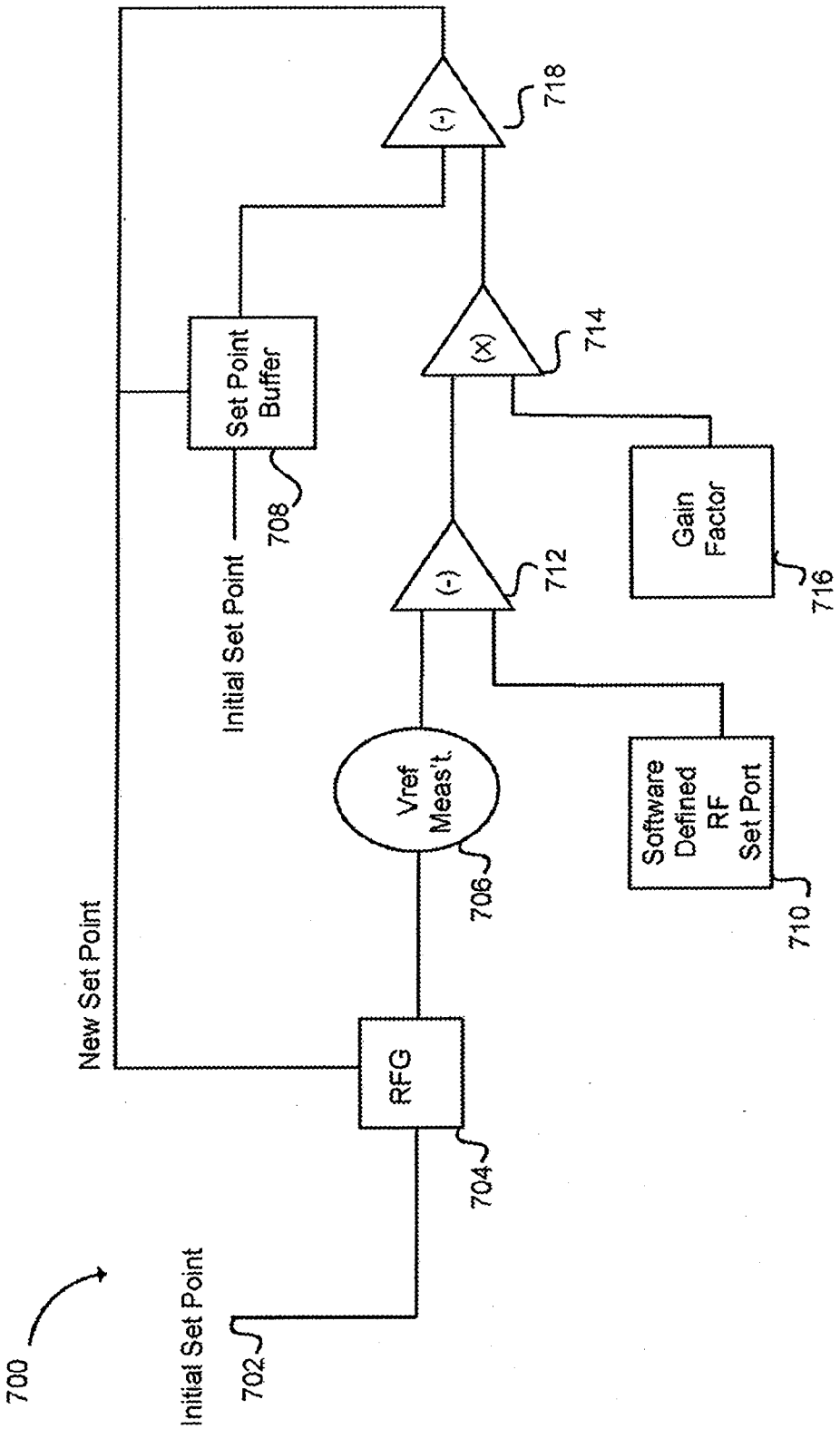

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Initial Set Point
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Set Point Buffer
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(X)
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Gain Factor
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Software Defined RF Set Port
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Fig. 7

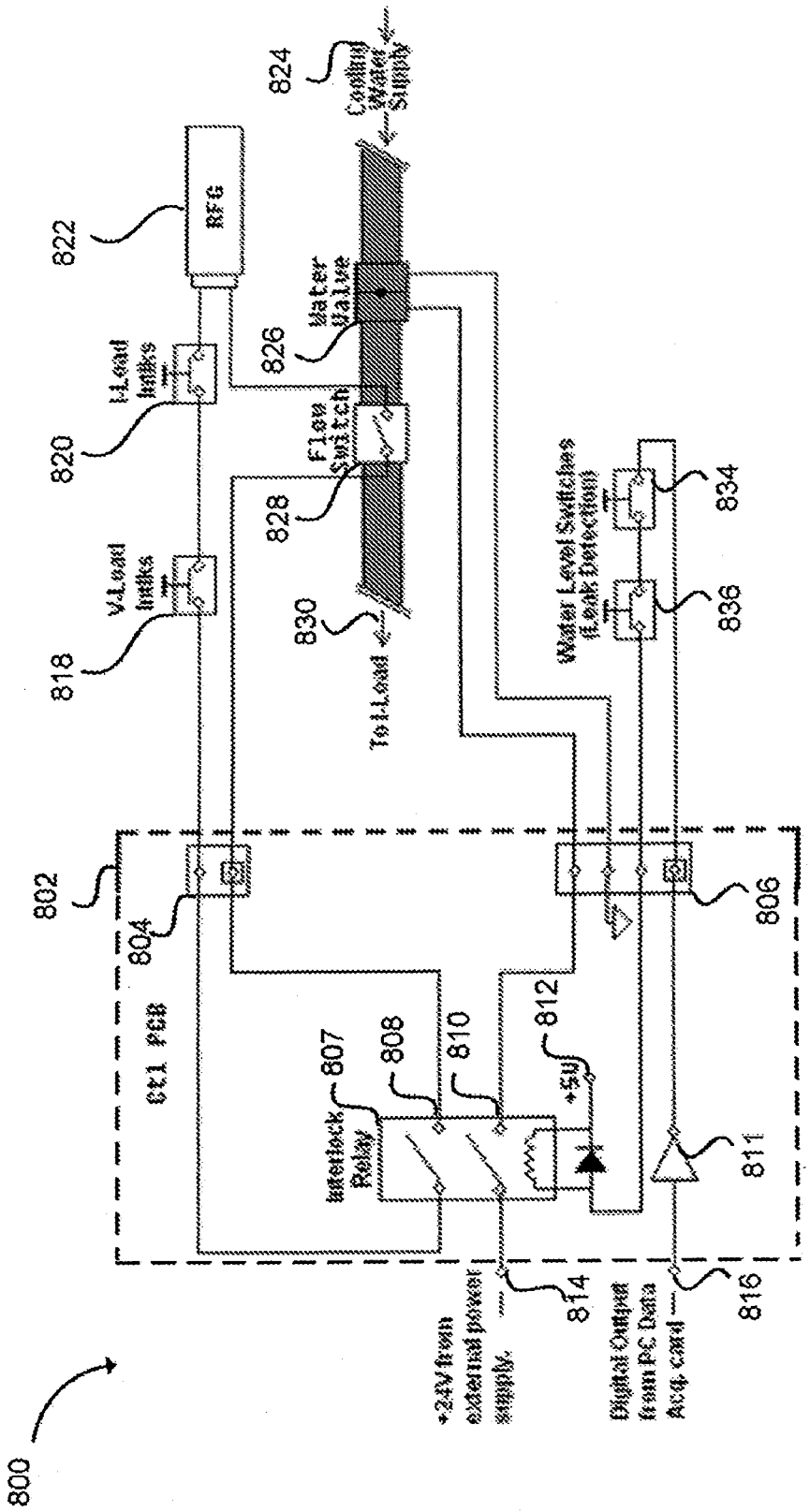

800
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ctl PCB
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Interlock Relay
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+24V from external power supply
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Digital Output from PC Data Acq. card
818
V-Load links
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RFG
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Cooling Water Supply
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Water Valve
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Flow Switch
830
To I-Load
834
Water Level Switches (Leak Detection)
836

Fig. 8

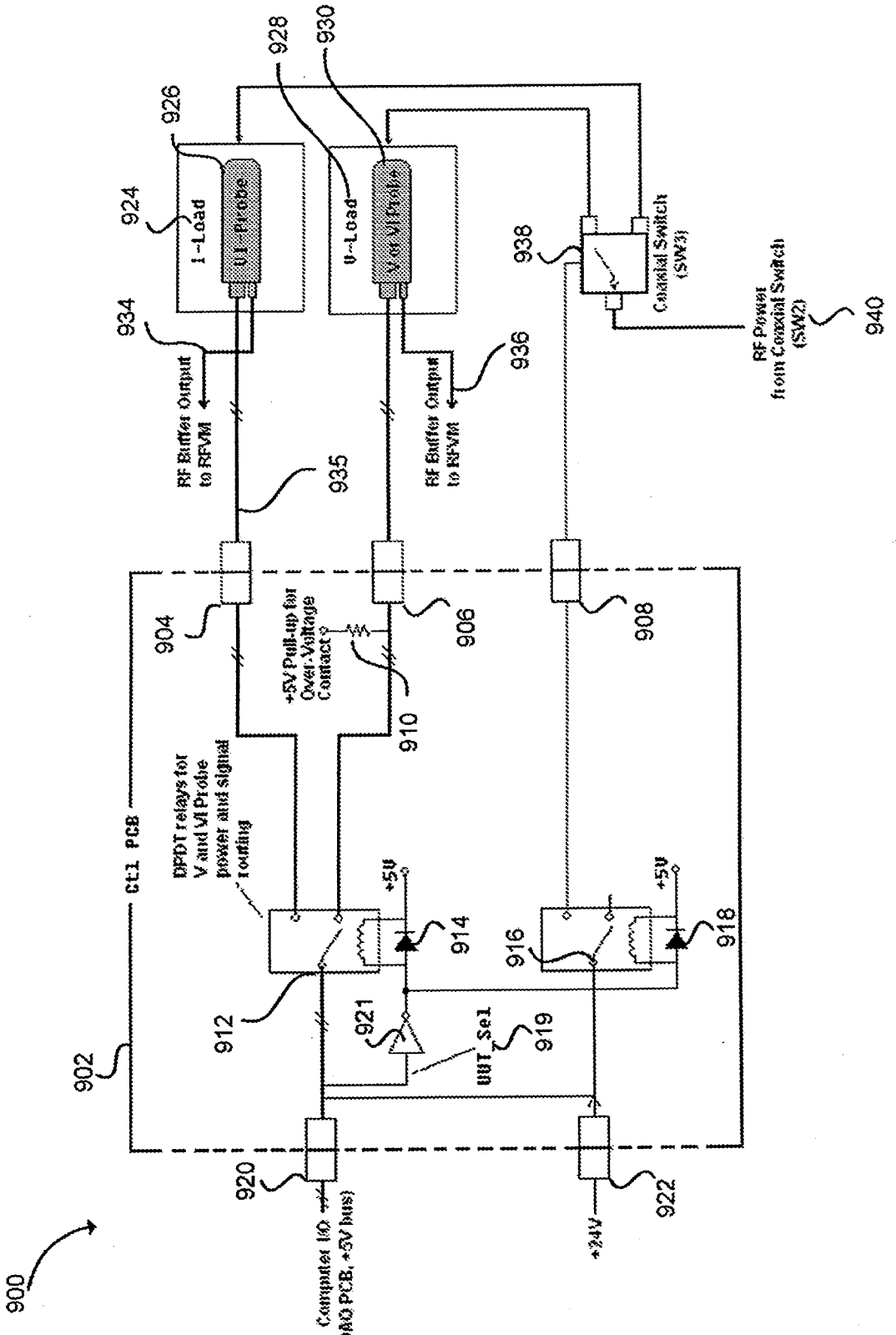

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Ctl PCB
DPDT relays for V and VI Probe power and signal routing
+5V Pull-up for Over-Voltage Contact
+5V
UUT_Sel
I-Load
VI Probe
V-Load
Coaxial Switch (SW3)
RF Power from Coaxial Switch (SW2)
RF Buffer Output to RFVM
Computer I/O (DAQ PCB, +5V bus)
+24V

Fig. 9