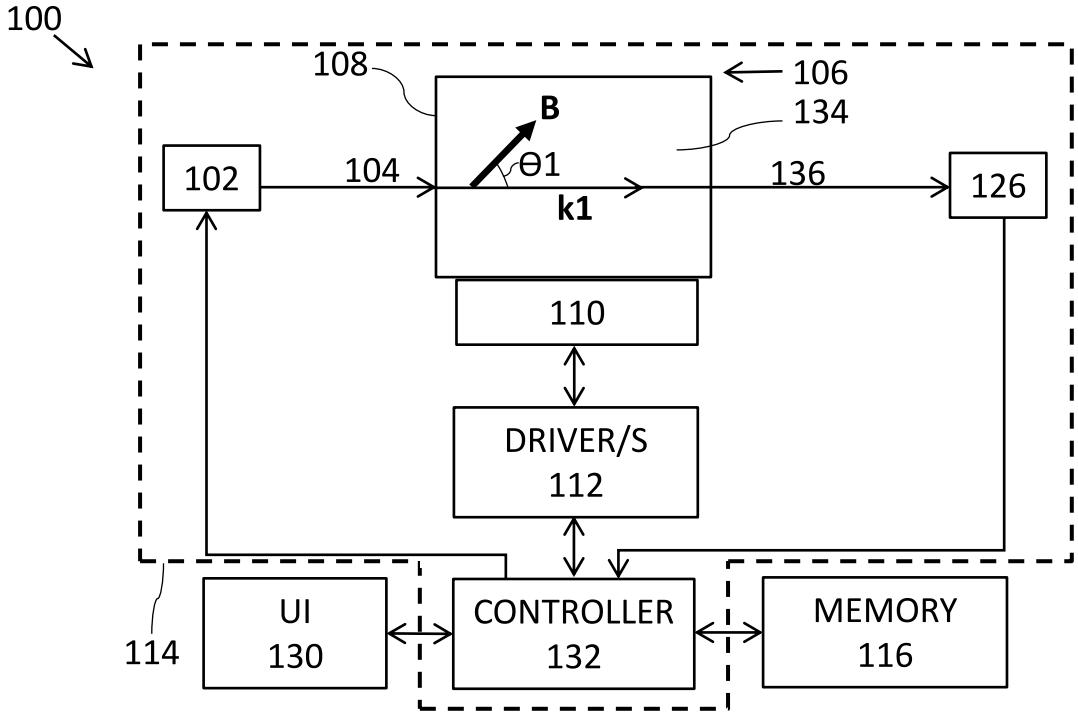


FIG. 1

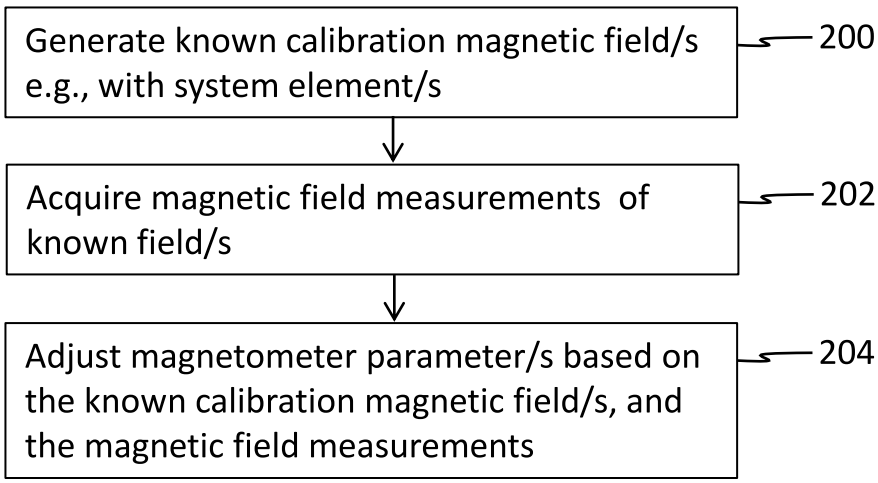


FIG. 2

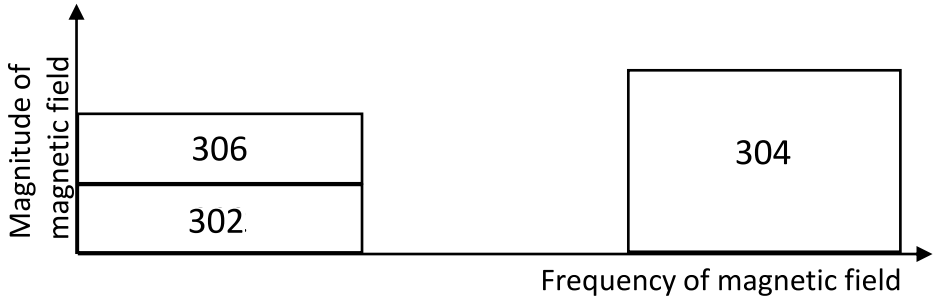


FIG. 3

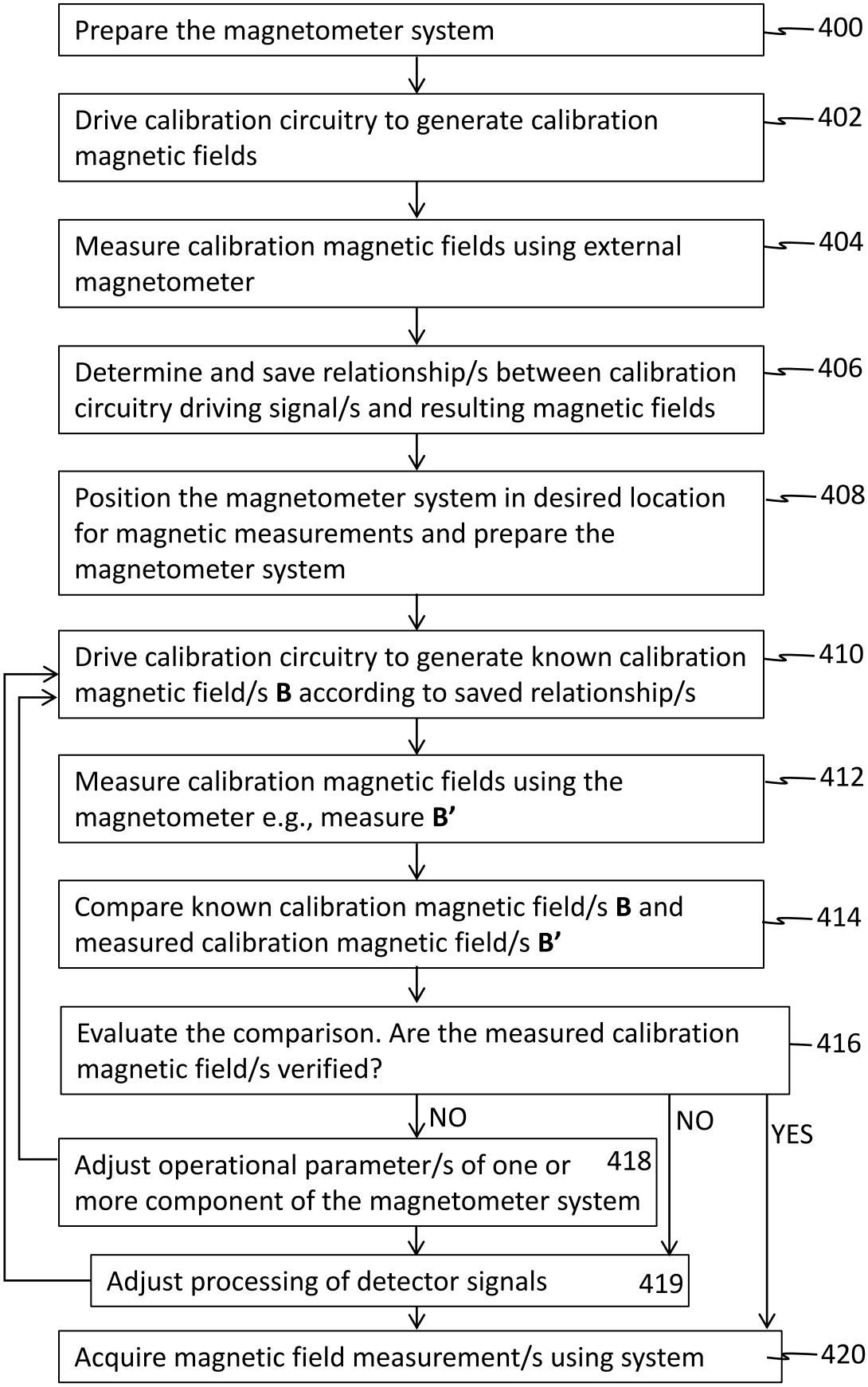

Prepare the magnetometer system
400
Drive calibration circuitry to generate calibration magnetic fields
402
Measure calibration magnetic fields using external magnetometer
404
Determine and save relationship/s between calibration circuitry driving signal/s and resulting magnetic fields
406
Position the magnetometer system in desired location for magnetic measurements and prepare the magnetometer system
408
Drive calibration circuitry to generate known calibration magnetic field/s **B** according to saved relationship/s
410
Measure calibration magnetic fields using the magnetometer e.g., measure **B'**
412
Compare known calibration magnetic field/s **B** and measured calibration magnetic field/s **B'**
414
Evaluate the comparison. Are the measured calibration magnetic field/s verified?
416
NO
NO
YES
Adjust operational parameter/s of one or more component of the magnetometer system
418
Adjust processing of detector signals
419
Acquire magnetic field measurement/s using system
420

FIG. 4

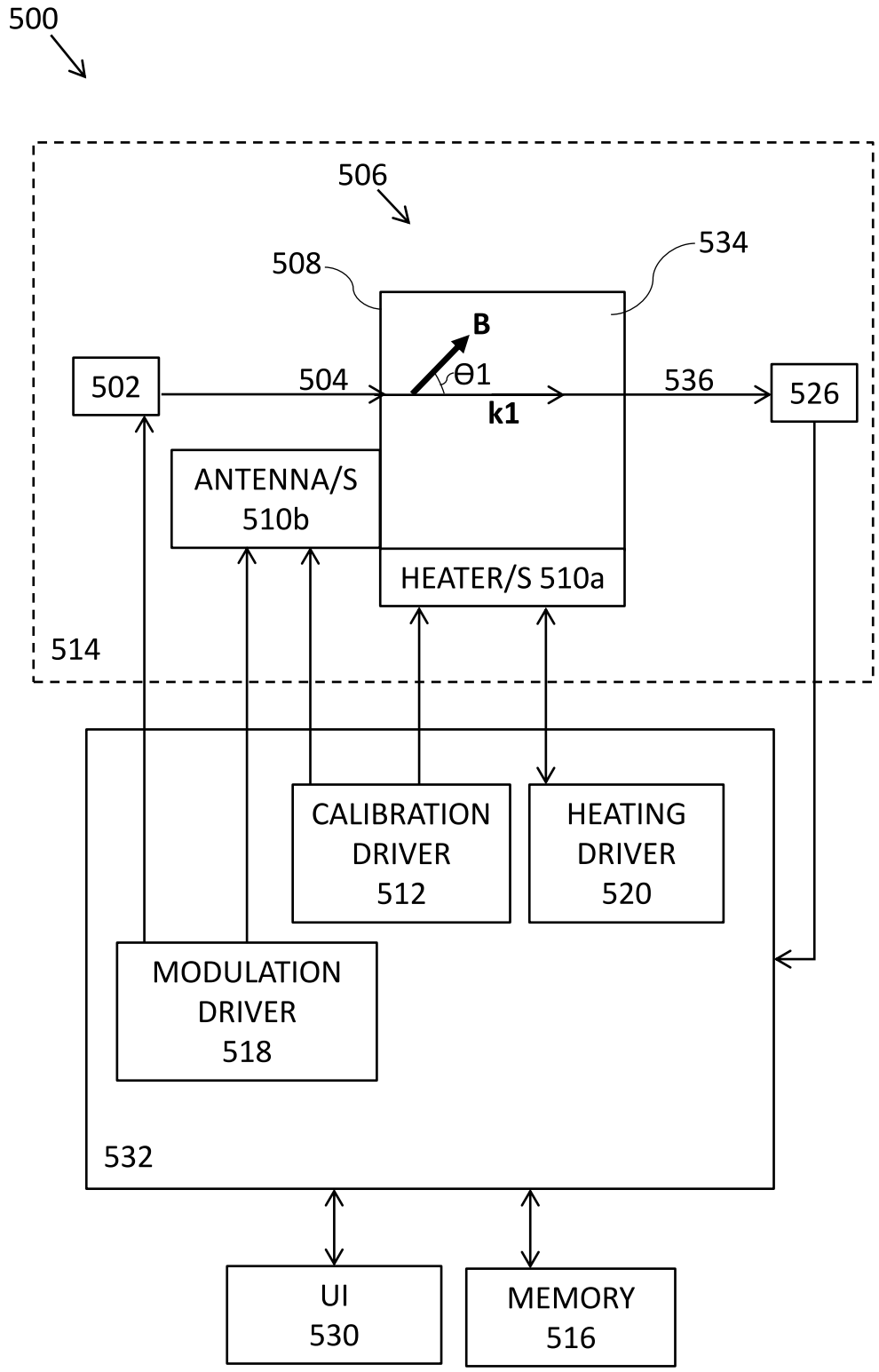

500
506
508
534
B
θ1
502
504
536
526
k1
ANTENNA/S
510b
HEATER/S 510a
514
CALIBRATION
DRIVER
512
HEATING
DRIVER
520
MODULATION
DRIVER
518
532
UI
530
MEMORY
516

FIG. 5