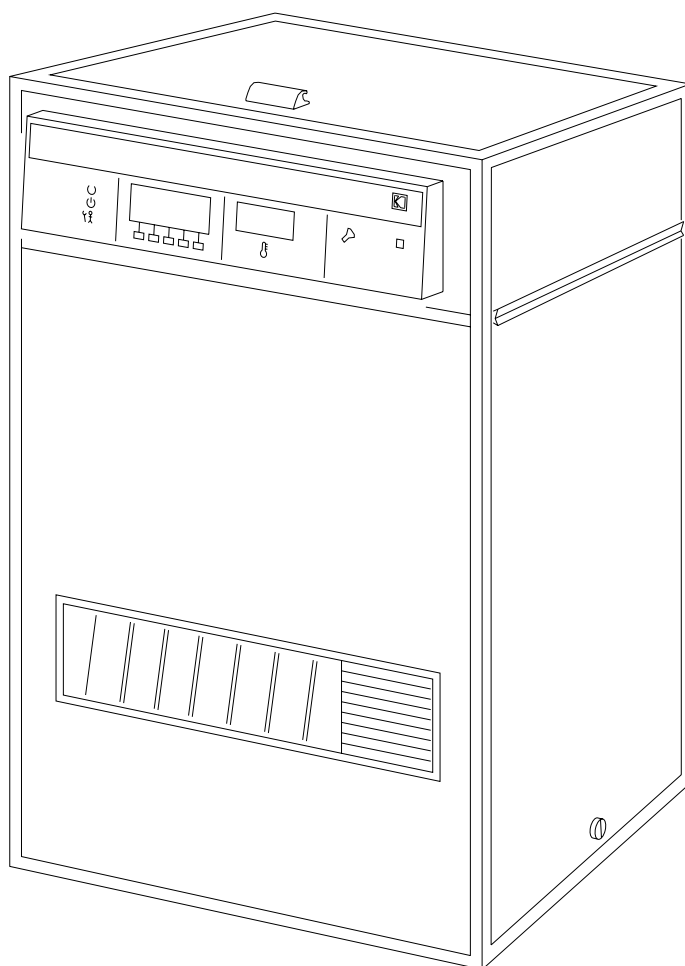




**ROUGH DRAFT
THEORY GUIDE
for the
Kodak X-Omat M6RA PROCESSOR**



PLEASE NOTE

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CAUTION



This equipment includes parts and assemblies sensitive to damage from electrostatic discharge. Use caution to prevent damage during all service procedures.

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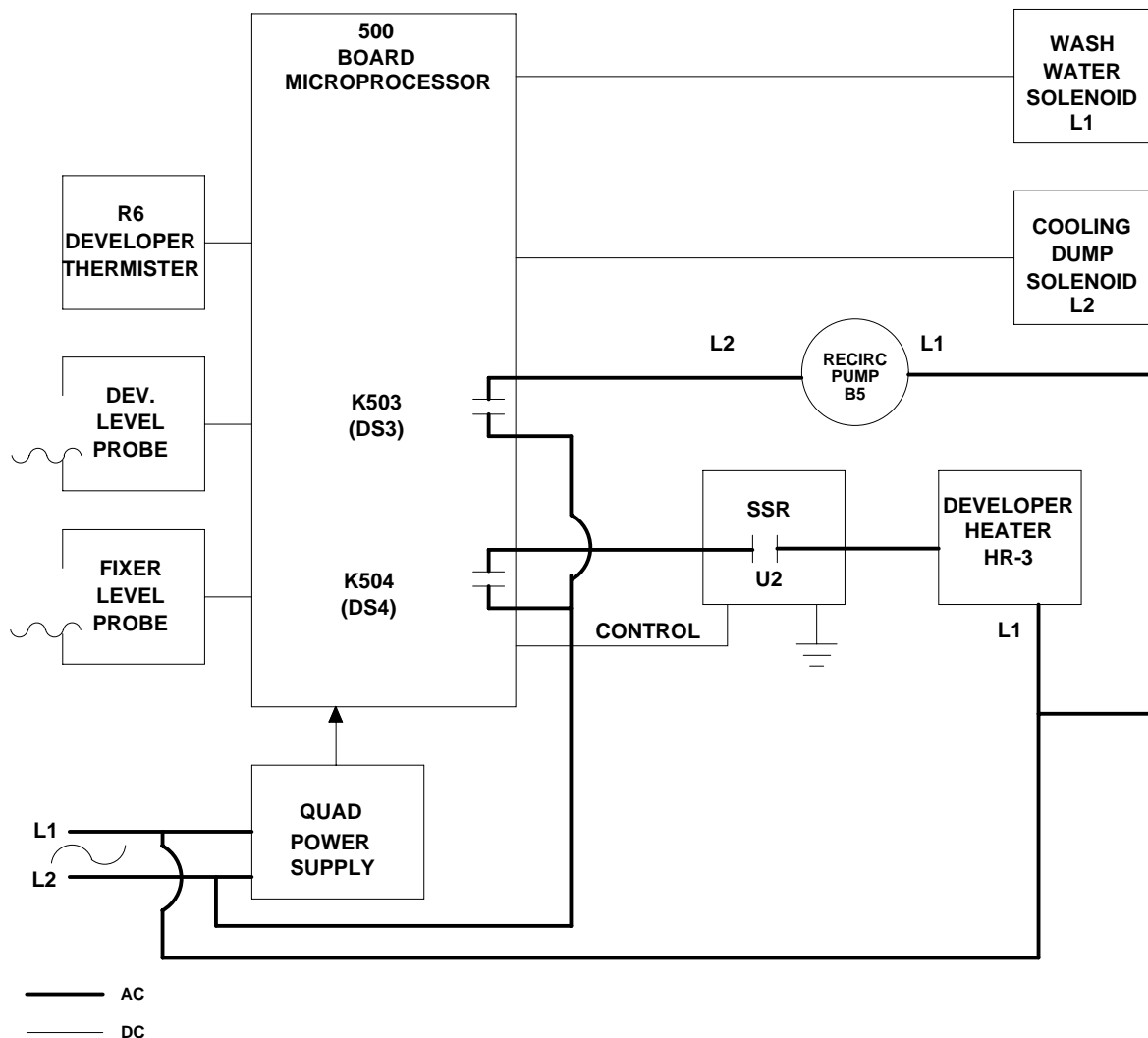
Description	Page
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Developer Temperature Control

When the GPMC (500 Board) senses that both the DEVELOPER and FIXER PROBES are submerged in solution (reduced resistance), RELAY K503 is energized, thus applying line AC voltage across B5, the RECIRCULATION PUMP. Both the DEVELOPER LEVEL PROBE and the DEVELOPER THERMISTOR, R3, are looked at by the 500 Board. K504 is used as an enable for the DEVELOPER HEATER. K503 turns on the RECIRCULATION PUMP. Due to the changes in resistance of R3, SSRU2 is turned on and off at varying rates to control the temperature. The DEVELOPER HEATER,

R3, has an internal overtemperature THERMOSTAT. If recirculation is lost, the internal THERMOSTAT in R3 will open. The 500 Board also controls the WASH WATER SOLENOID, L1, and the DEVELOPER COOLING SOLENOID, L2. In the event that developer temperature goes .5°F above set temperature, it opens the DEVELOPER COOLING SOLENOID which is in the DRAIN of the WASH TANK. It also turns on WASH WATER SOLENOID, L1. The rate of L1 is 1.5 gallons per minute; the rate of L2 is 1.2 gallons per minute; and the DRAIN is routed through the cooling loop at the bottom of the DEVELOPER TANK.

BLOCK DIAGRAM DEVELOPER TEMPERATURE CONTROL



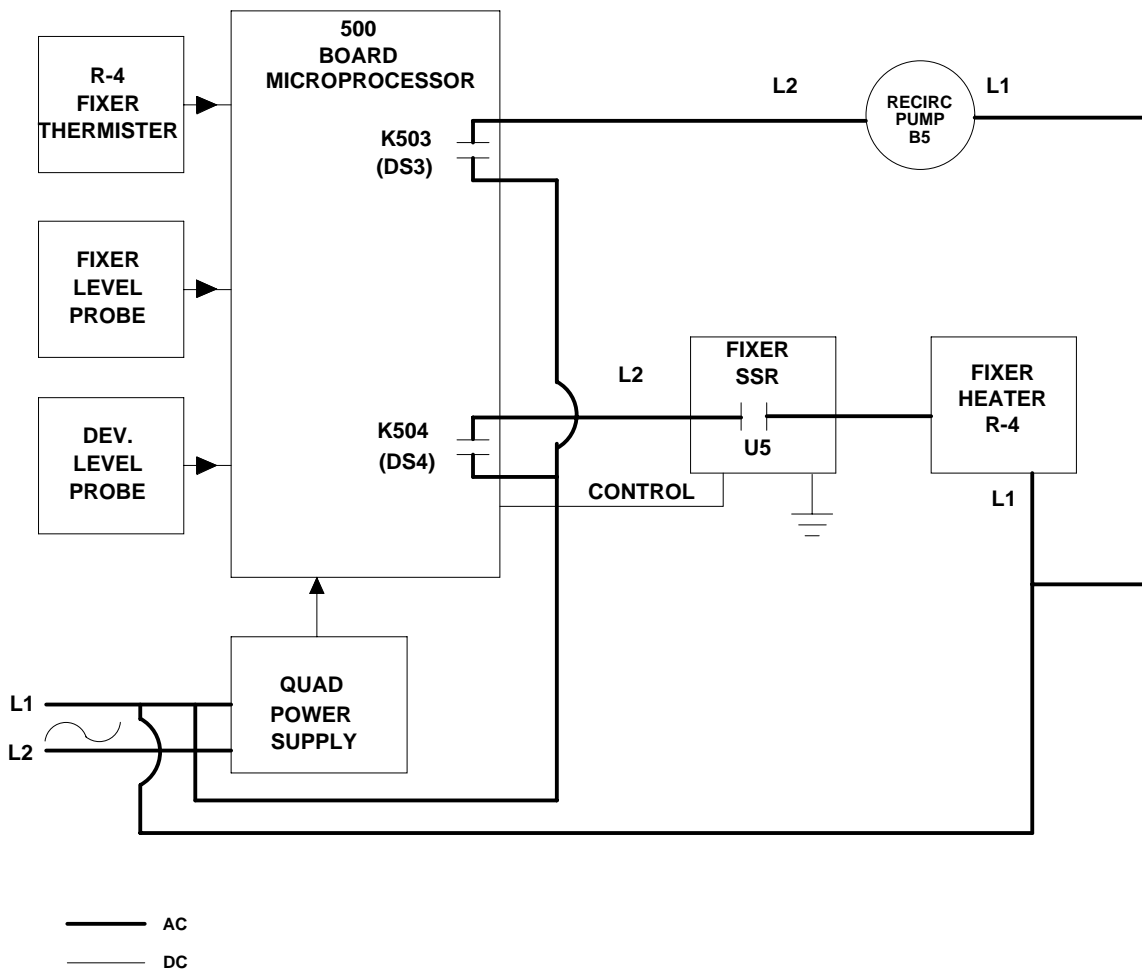
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Fixer Temperature Control

Resistance, or R4, is sensed by the GPMC (500 Board) and is used to control SSRU2. K504 enables the DEVELOPER HEATER. SSRU2 controls the DEVELOPER HEATER. K503 turns on the RECIRCULATING PUMP, B5. So we have a very large swing — plus 15°F, minus 10°F — and is normally controlled at 90° for all cycles. The

thermistor is R4. The 500 Board senses the variations in resistance. K503 is the enable. The variations are used to control SOLID STATE RELAY U5. The FIXER HEATER is R4. FIXER HEATER R4 has an internal overtemperature THERMOSTAT that in the event of loss of recirculation, it will open. The 500 Board also turns on K503 which turns on the RECIRCULATION PUMP, B5.

BLOCK DIAGRAM FIXER TEMPERATURE CONTROL



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The DRYER THERMISTOR is R5. Variations in resistance of R5 are sensed by the 500 Board (GPMC). This controls the DRYER HEATER RELAY, an enable which is K501; The DRYER

BLOCK DIAGRAM DRYER TEMPERATURE CONTROL

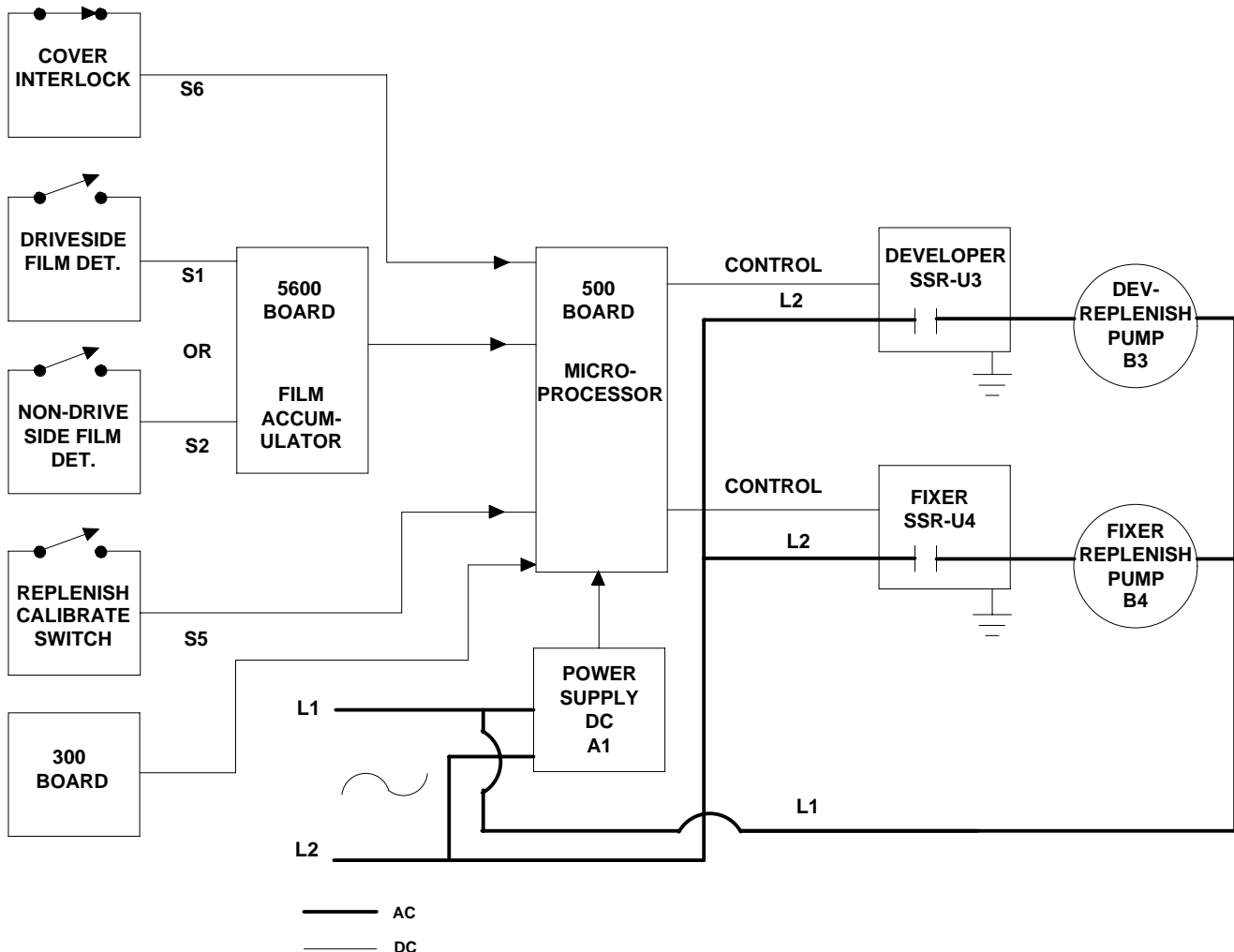


Developer/Fixer Replenishment Control

The COVER INTERLOCK SWITCH, F6, must be closed. The UFD (300 Board) senses film is going through. DETECTOR SWITCHES S1 and S2 detect the end of the film. The timing takes place on the 300 Board and the 500 Board decides when the alarm within the UFD (5500 5600 Board) will sound off to let the operator know when the next film can be fed into the PROCESSOR. When the UFD (300) Board signals the 500 Board that it has detected the

equivalent of a 14 x 17 sheet of film, it tells the DEVELOPER SOLID STATE RELAY, U3, and the FIXER SOLID STATE RELAY, U4, to turn on the DEVELOPER REPLENISHMENT PUMP, B3, and the FIXER REPLENISHMENT PUMP, B4, for times that are set up in the software. To check replenishment rates there is a replenishment calibrate switch, S5, and it feeds directly through the 500 Board to both PUMPS.

BLOCK DIAGRAM DEVELOPER/FIXER REPLENISHMENT CONTROL



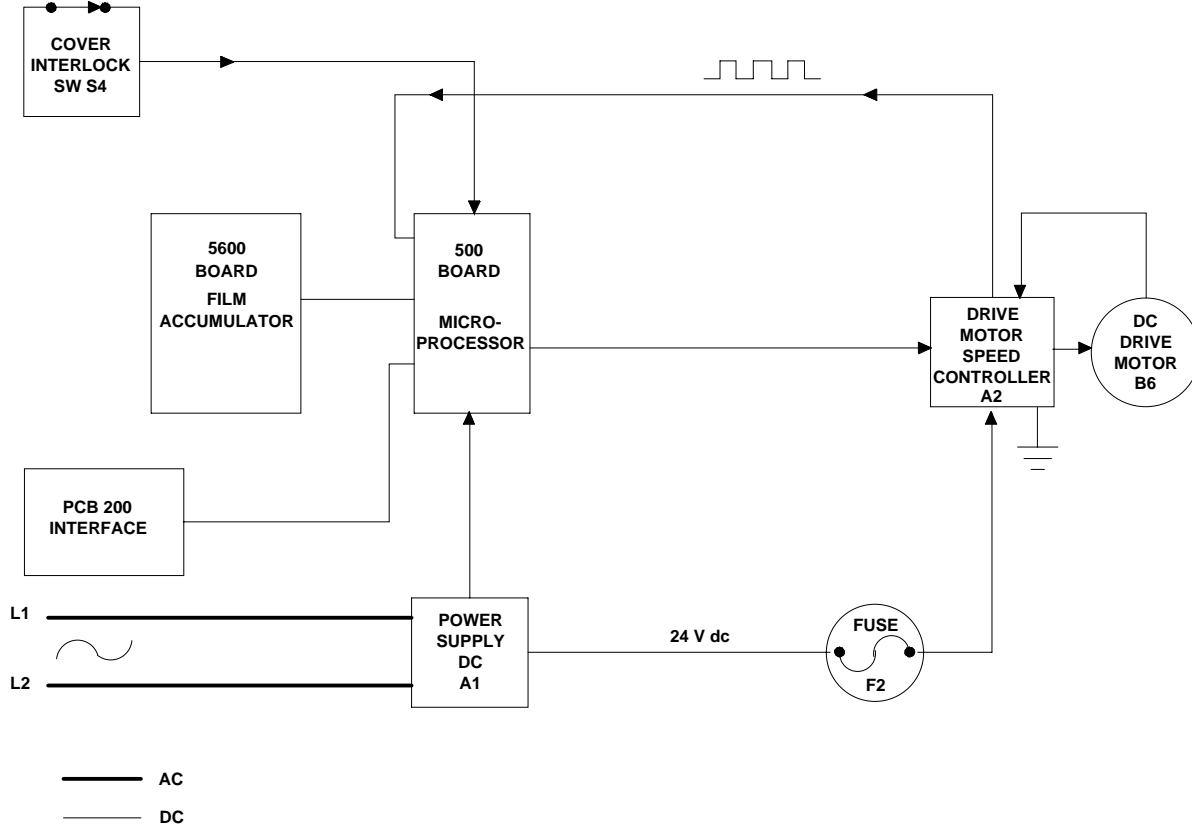
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D.C. Drive Motor Control

INTERLOCK SWITCH F6 must be closed.
Instructions are given to the 500 Board via the 200 Board (Interface Board) KEYPAD display to tell the 500 Board in which cycle to operate. This information is passed to the DRIVE MOTOR SPEED CONTROLLER, A2, through the CURRENT LIMITER

BOARD 400, and through RELAY K506. The control is a varying DC voltage that goes to A2 from the 500 Board. The DRIVE MOTOR SPEED CONTROLLER uses this as a control voltage and provides power to the D.C. DRIVE MOTOR. The D.C. DRIVE MOTOR produces feedback pulses which are fed back to the 500 Board.

BLOCK DIAGRAM D.C. DRIVE MOTOR CONTROL



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Figure 1 All Systems Block Diagram

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Health Sciences Division



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