



*Personal Computer
Hardware Reference
Library*

IBM 10MB Fixed Disk Drive

6361482

IBM 10MB Fixed Disk Drive



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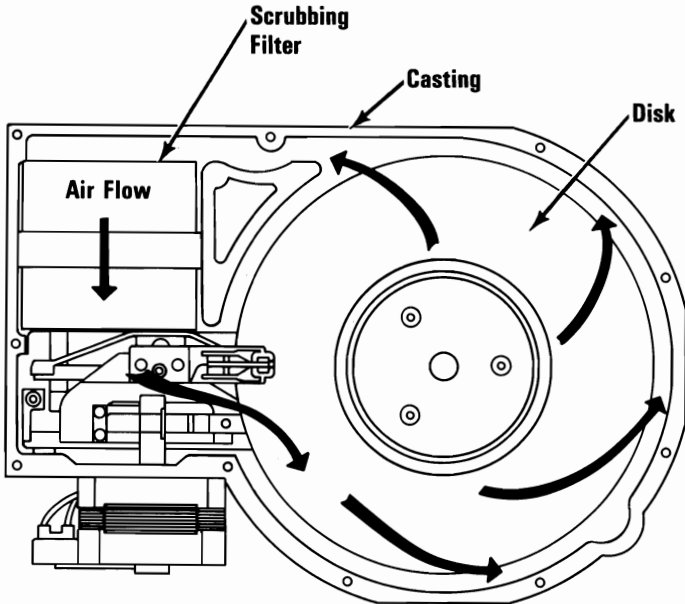
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Description

The IBM 10MB Fixed Disk Drive is a random-access storage device that uses two non-removable 5-1/4 inch disks for storage. Each disk surface employs one movable head to service 306 cylinders. The total formatted capacity of the four heads and surfaces is 10M bytes (17 sectors per track with 512 bytes per sector and a total of 1224 tracks).

An impact-resistant enclosure provides mechanical and contamination protection for the heads, actuator, and disks. A self-contained air recirculating system, which consists of an internal filter and a breather filter, maintains a clean-air environment. Thermal isolation of the stepper and spindle motor assemblies from the disk enclosure results in a very low temperature rise within the enclosure. This isolation provides a greater off-track margin and the ability to perform read and write operations immediately after power-up with no thermal stabilization delay.



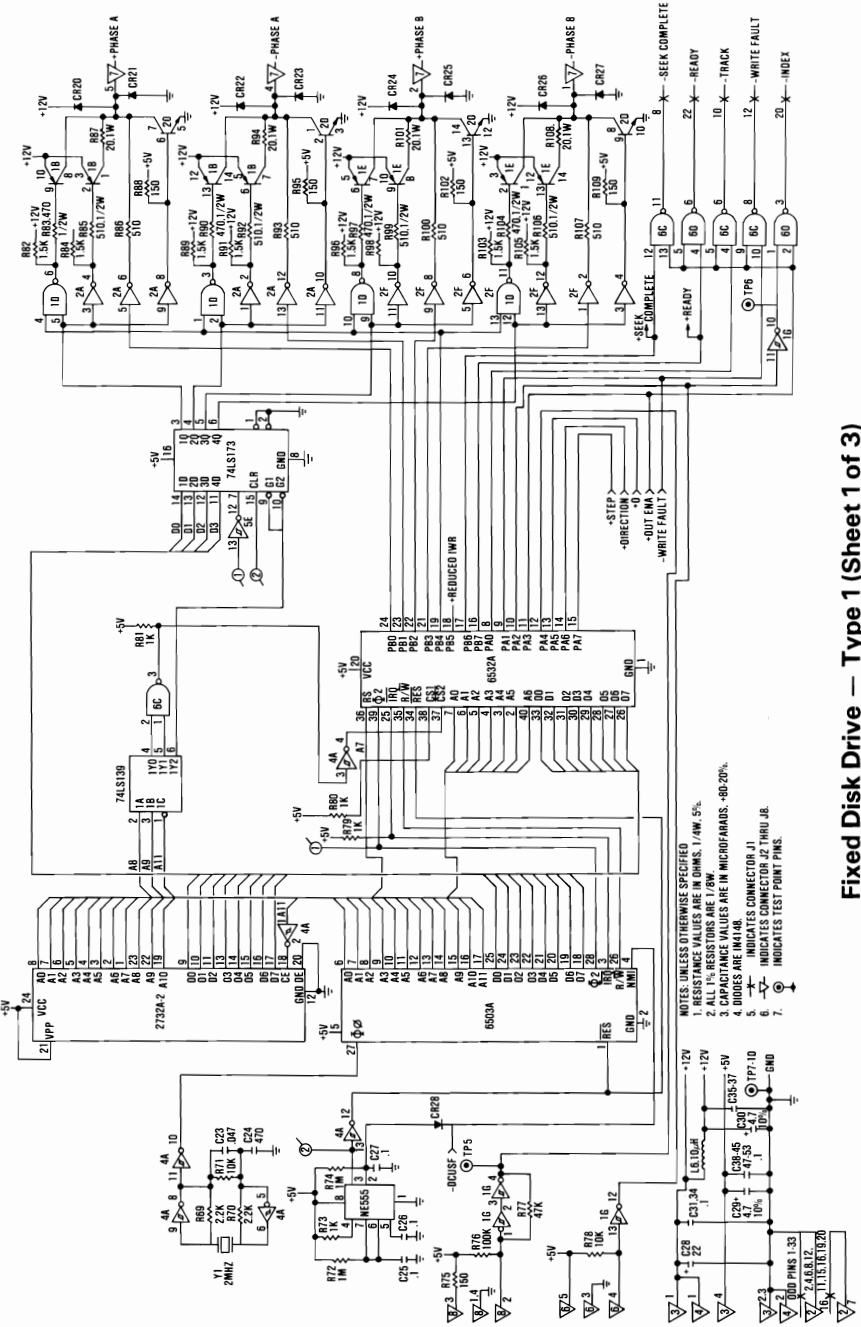


Specifications

Size (maximum)	
Height	82.55 mm (3.25 in.)
Width	146.05 mm (5.75 in.)
Depth	203 mm (8.0 in.)
Weight	2.08 kg (4.6 lb)
Power	+12 Vdc \pm 5%, 1.8 A (4.5 A maximum) +5 Vdc \pm 5%, 0.7 A (1.0 A maximum)
Maximum Ripple	1% with equivalent resistive load
Media	Rigid media disk
Track Density	345 tracks per inch
Number of Tracks	1224
Temperature	
Operating	4 to 50°C (40 to 122°F)
Non-operating	-40 to 60°C (-40 to 140°F)
Relative humidity	
Operating	8 to 80% (non-condensing)
Maximum Wet Bulb	26°C (78°F)
Shock	
Operating	10 Gs
Non-operating	20 Gs
Access Time	3 ms track-to-track
Average Latency	8.33 ms
Error Rates	
Recoverable	1 per 10 ¹⁰ bits read
Irrecoverable	1 per 10 ¹² bits read
Seek Errors	1 per 10 ⁶ seeks
Design Life	5-years (8,000 hours MTF)
Disk speed	3600 rpm \pm 1%
Transfer Rate	5.0M bps
Recording Mode	MFM

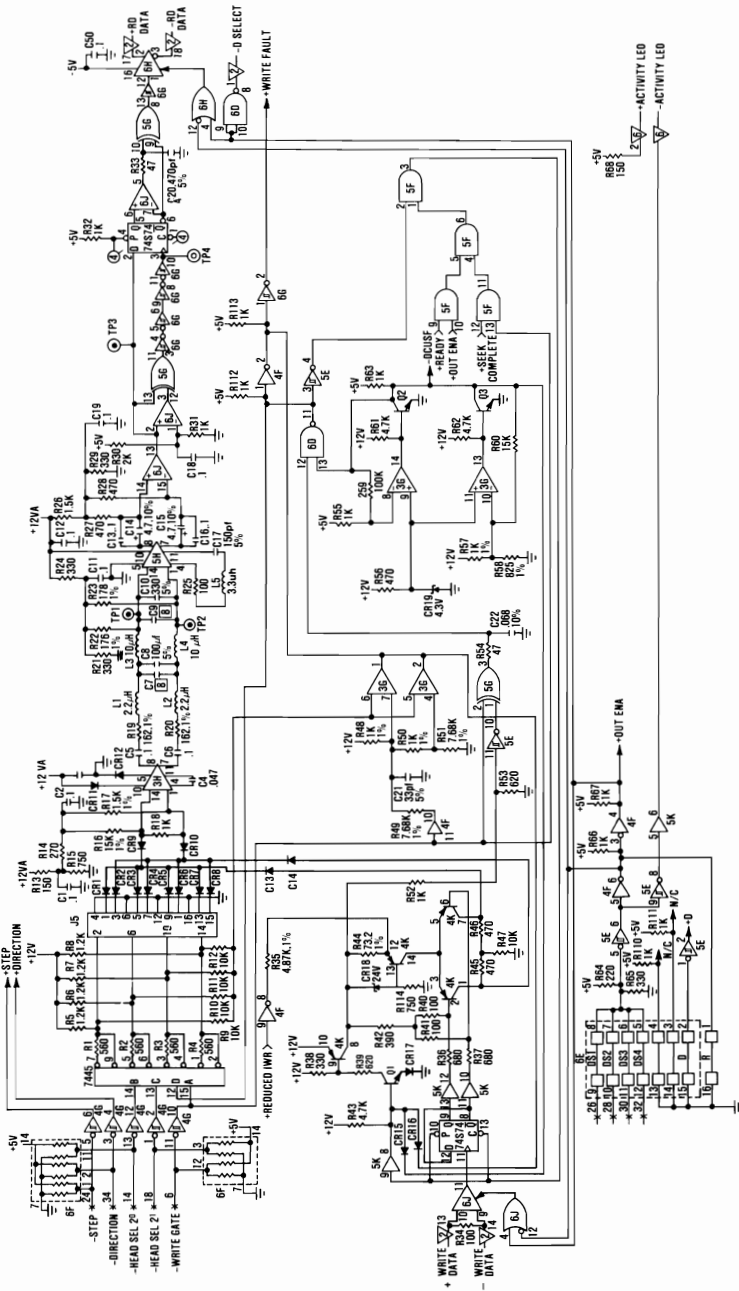
Mechanical and Electrical Specifications

Logic Diagrams

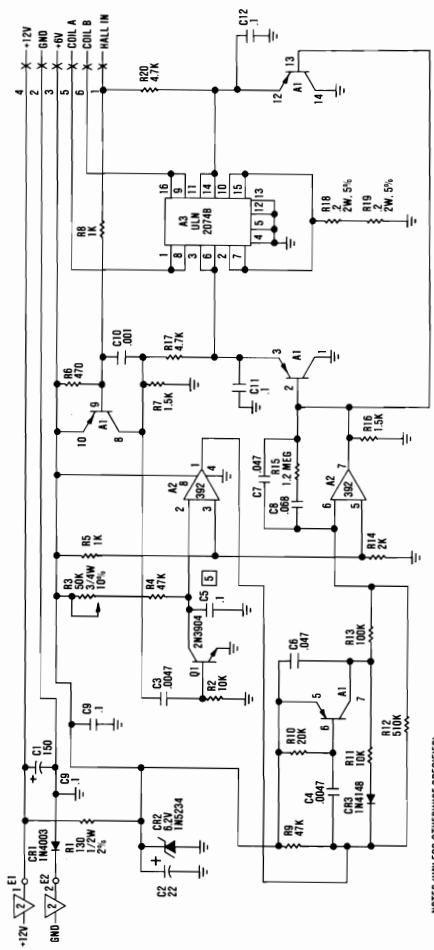


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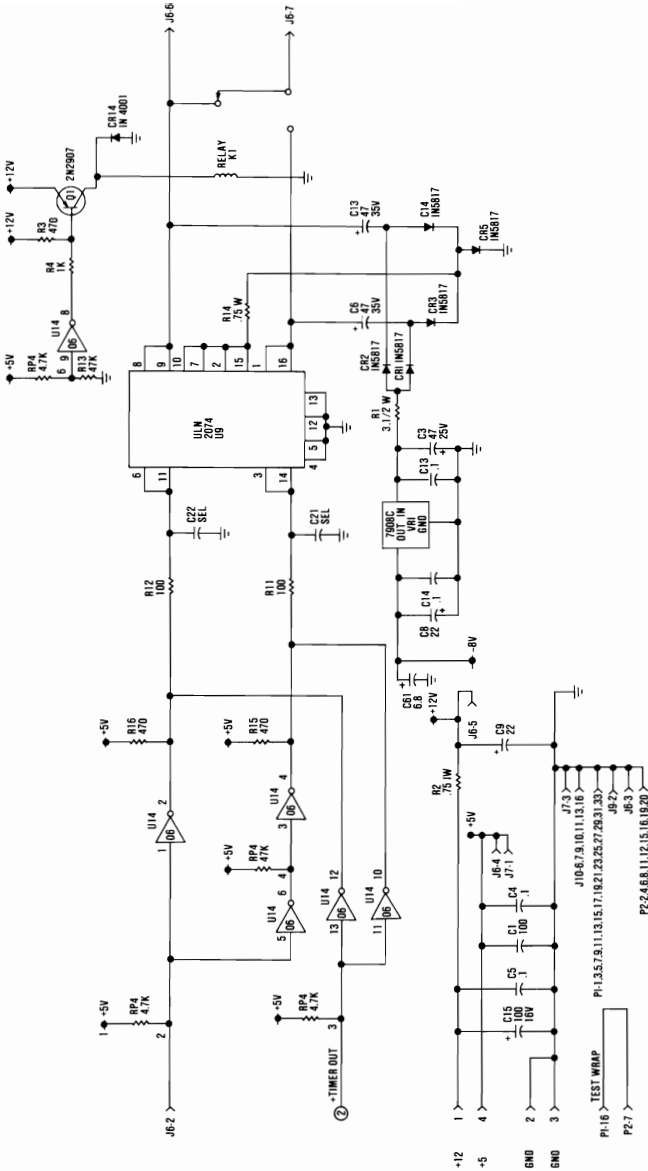
Fixed Disk Drive — Type 1 (Sheet 2 of 3)



NOTES (UNLESS OTHERWISE SPECIFIED):
 1. ALL RESISTORS ARE IN OHMS 1/4W 5%.
 2. ALL CAPACITORS ARE IN MICROFARADS. 10%.
 3. UNLESS OTHERWISE SPECIFIED, ALL DIODES ARE 1N4001.
 4. INDICATES JZ.
 5. POLYCARBONATE 50V. 10%.

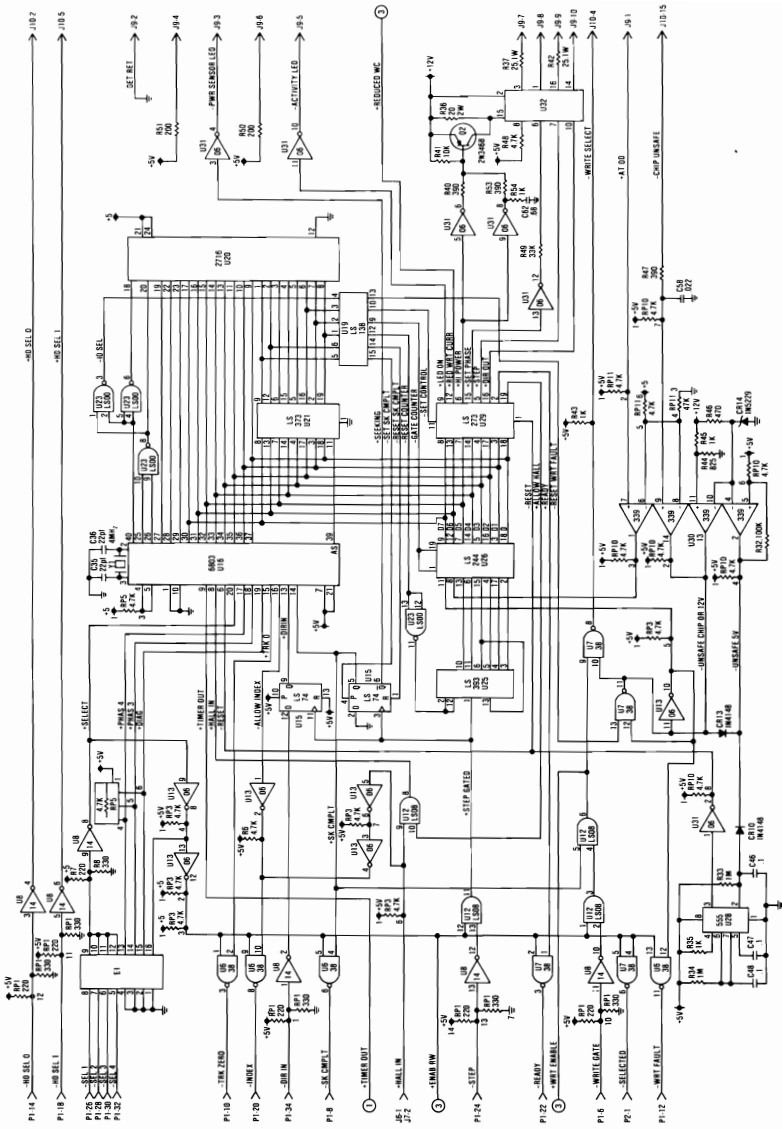
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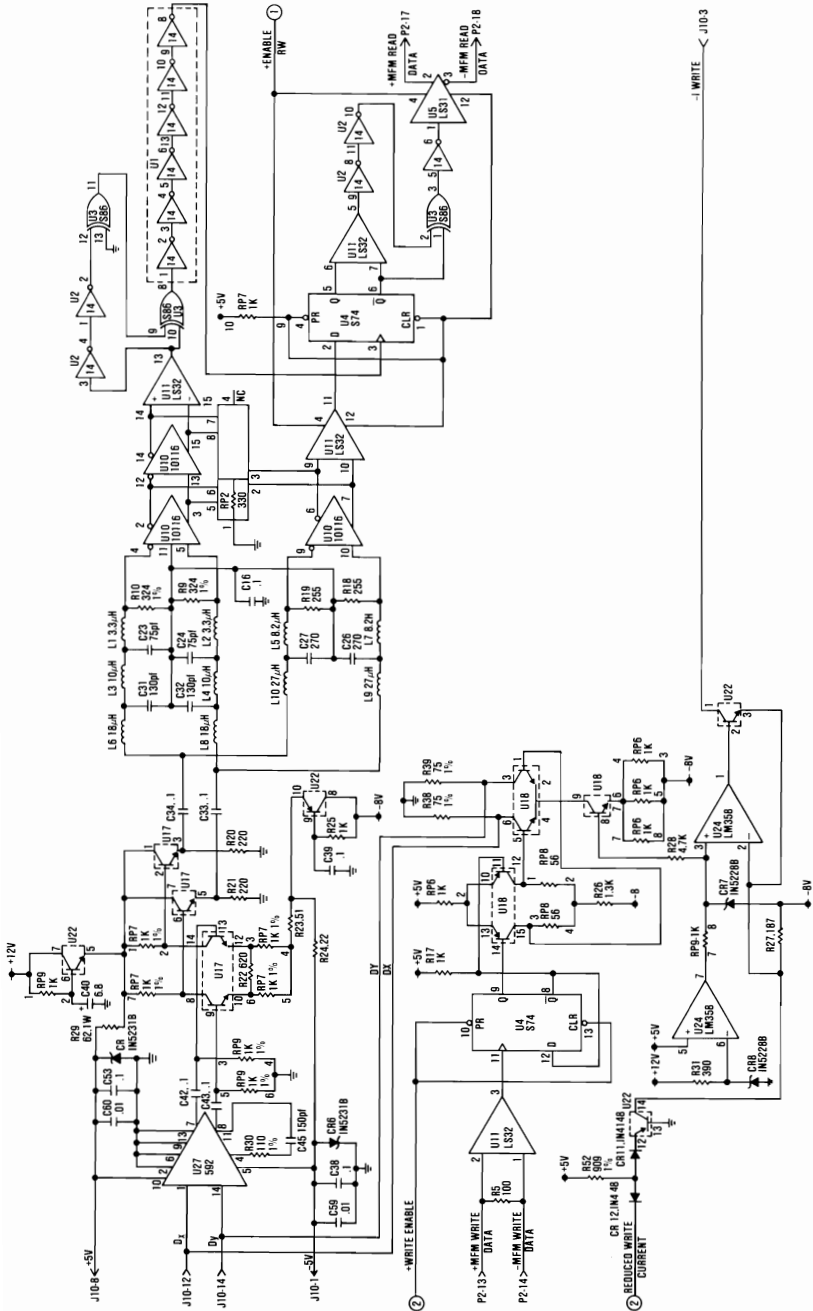


- NOTES:
 1. SHEET TO SHEET CONNECTION IS AS FOLLOWS:
 2. UNLESS OTHERWISE SPECIFIED ALL RESISTORS ARE 1/4W 5% VALUE IN OHMS
 CAPACITORS - 50-20% VALUE IN μF
 3. E1 IS A PROGRAMMABLE JUMPER SOCKET

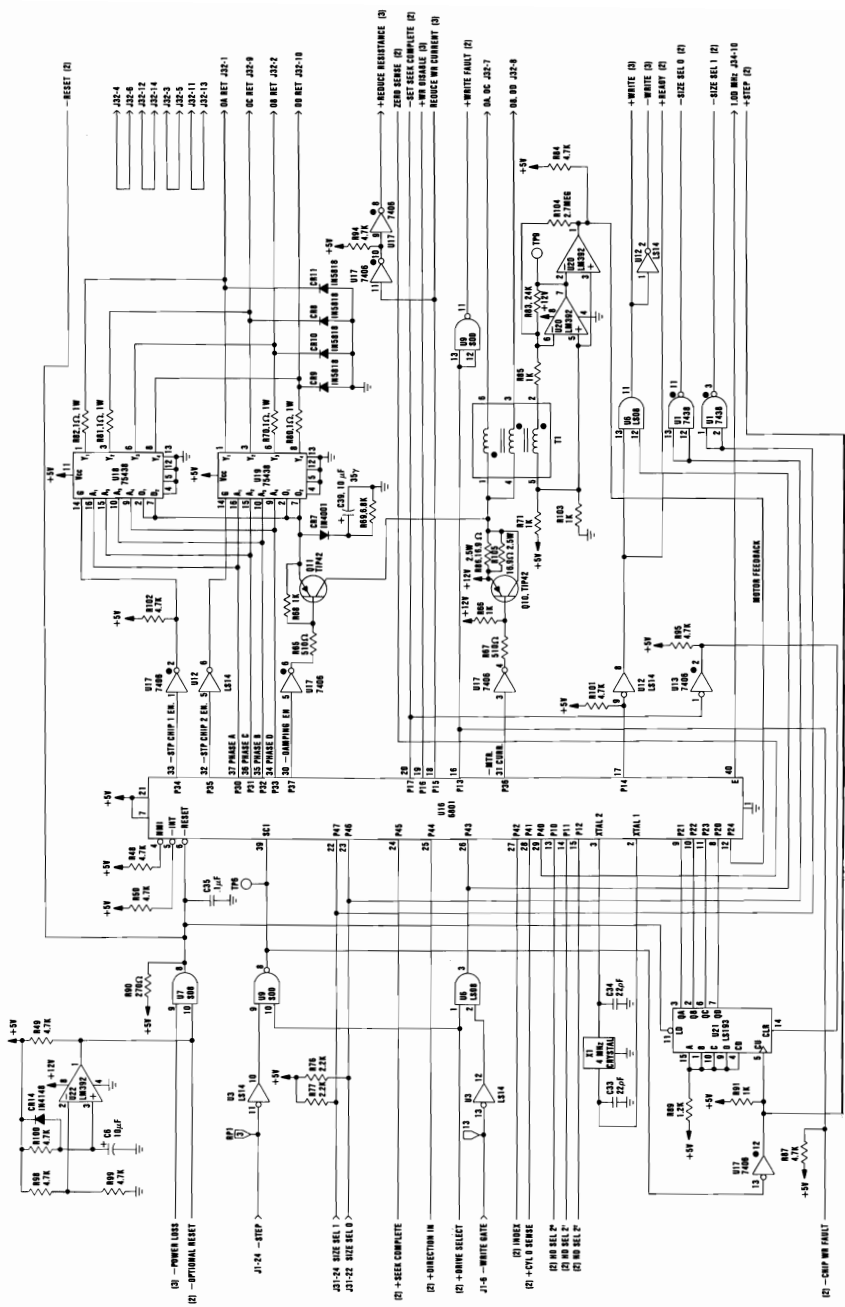
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Fixed Disk Drive — Type 2 (Sheet 2 of 3)

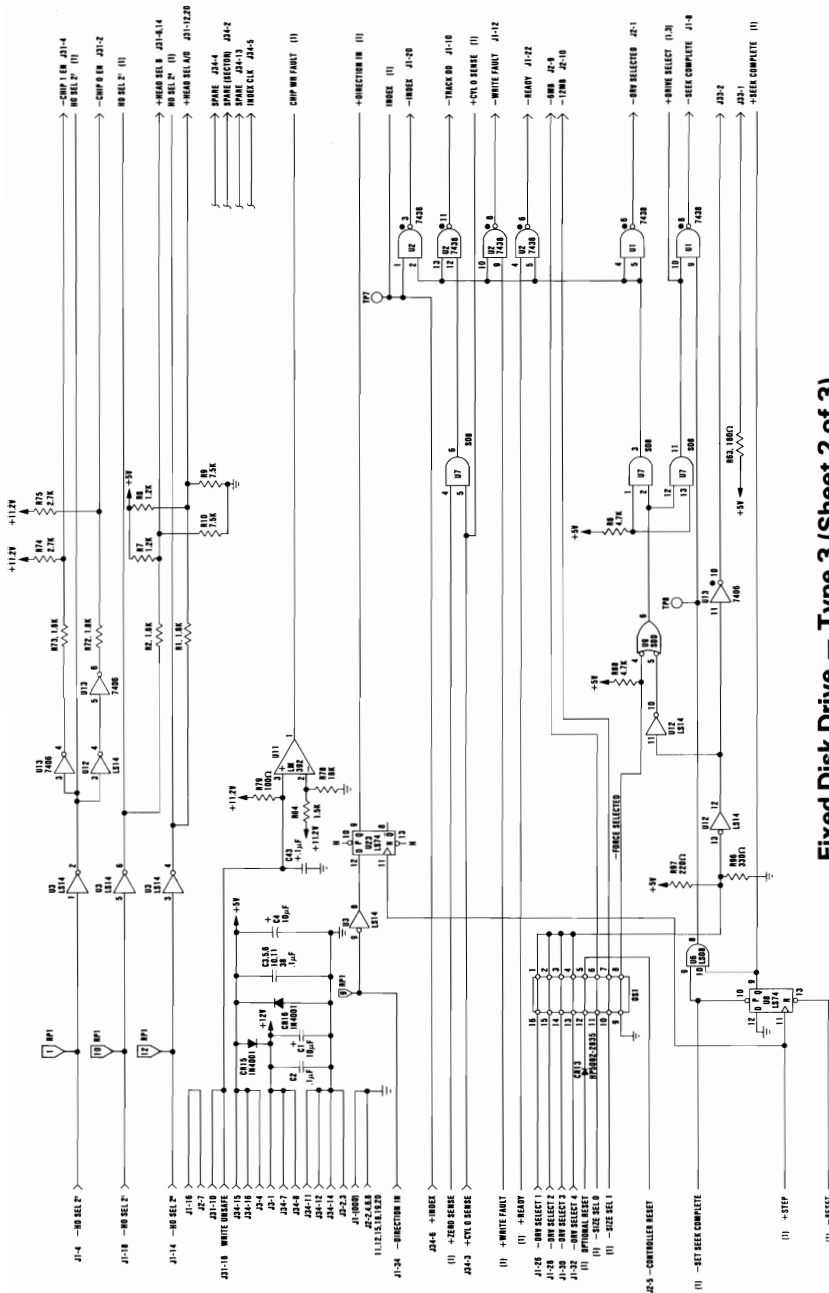


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Fixed Disk Drive — Type 3 (Sheet 2 of 3)

Notes:

