

EQUIPMENT LIST

SATURN ELECTRONICS CORP.
28450 Northline Road, Romulus, MI 48174

QTY	DRILLING DEPARTMENT
5	EXCELLON CENTURY 2001 21" X 30" PANEL SIX SPINDLES.
4	EXCELLON HVP, 21" X 30" PANEL FIVE SPINDLES.
2	EXCELLON SYSTEM 2000, 21" X 30" FOUR SPINDLES.
1	EXCELLON I-CONCEPT 4 – 4 SPINDLE 21" X 24" DRILLING MACHINE (DAE)
1	EXCELLON CONCEPT 1
3	MANIA MICRONIC - 86
2	PRECISION AUTO STACKER
3	AIR COMPRESSOR 100 H.P. ROTARY
1	AIR COMPRESSOR 50 H.P ROTARY
1	CENTRAL VACUUM SYSTEM 75 H.P
1	AUTOMATIC DE-PINNER
1	GLEMBROOK RTX-113 X-RAY MACHINE FOR MULTILAYER BOARD
1	JOHNSON & JOHNSON HOLE SURFACE GRINDING MACHINE.
1	SHEAR
2	ALPHA 01 AUTOMATIC LOADER & UN-LOADER DRILLING MACHINE.
1	EXCELLON LVD COBRA(CO ₂ /UV) LASER DRILLING MACHINE
	PLATING DEPARTMENT
	<i>ALL CONVEYORIZED SYSTEMS ARE EQUIPPED WITH LOADER/UNLOADER.</i>
1	AUTOMATIC ELECTROPLATING COPPER LINE 5100 SQFT/DAY.
1	AUTOMATIC ELECTROPLATING COPPER LINE, 5000 SQFT/DAY.
1	ISHII HYOKI 4 BRUSH BRUSHING SYSTEM WITH AUTOMATIC BRUSH ADJUSTMENT.
1	HOLL-MULLER-30 SHADOW CONVEYORIZED PROCESS
1	SHADOW LOADER CE, RESCOTRON MODEL #CE125560
1	HOLL-MULLER-30 CLEANING SYSTEM
1	CLEANING UNLOADER; MITSUBHI, JAPAN S/N 0005349
1	HOLL-MULLER-30 PHOTO RESIST STRIPPER (THREE CHAMBERS)
1	HOLL-MULLER-30 ETCHER (FIVE CHAMBERS)
1	HOLL-MULLER-30 TIN STRIPPER WITH DRYER (TWO CHAMBERS)
1	SES LOADER CE; RESCOTRON, ITALY re00074260
1	SES UNLOADER; KUTTLER AUTOMATION GERMANY, MC#105958 TYPE 160U
1	DES LOADER; KUTTLER AUTOMATION GERMANY SERIAL #3463; TYPE RL160
1	DES UNLOADER; KUTTLER AUTOMATION GERMANY; MC#10594 Type 160u
1	COBRABOND LOADER CE; RESCOTRON ITALY RE00125660
1	IMMERSION SILVER LINE
1	AUTOMATIC IMMERSION GOLD LINE
1	ELECTRO GOLD PLATING LINE
1	MARCH PLASMA ETCH MACHINE
	IMAGE DEPARTMENT (YELLOW ROOM)
1	SILVER WRITER- 30 PHOTO PLOTTER [26" X 30"] WITH AUTO LOAD/UNLOAD
1	SILVER WRITER PHOTO PLOTTER [29" X 32"] [22" X 28"] [22" X 26"] WITH AUTO LOAD/UNLOAD
1	PRISM NT WORK STATION
3	OLEC ACCUPRINT – AP 30 8000 SUPER EIGHT PRINTER
3	OLEC ACCUPRINT – AP 30 6000 PRINTER
1	OLEC AX-28 AUTOMATIC IMAGING SYSTEM

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4	OLEC AT30 – ACCUTRAY – AUTOALIGN IMAGING PLATFORM
1	CHEMCUT MODEL 547-30 AQUEOUS DEVELOPER WITH DRYER (TWO CHAMBERS)
1	CHEMCUT MODEL 547-30 WITH TWO CHAMBER LPI DEVELOPER
1	CONVEYORIZED TWO SIDED UV OVEN
1	DYNACHEM AUTO CUT SHEET LAMINATOR W/LOADER, UNLOADER
1	MORTON 1600IV CUT SHEET LAMINATOR
1	JAMES RIVER AUTOMATIC DIAZO FILM DEVELOPER MODEL 6000.
1	UV FILM LAMINATOR
1	MULTILINE AUTOMATIC FILM PUNCH
1	FILM EXPOSURE
2	LOG "E" SILVER FILM PROCESSOR
2	MORTON AUTOMATIC 2600 COVER SHEET REMOVER
1	MET ONE LASER PARTICLE COUNTER
1	PERFECTEST MACHINE
1	VACUUM APPLICATOR 724
1	LOADER – REGULAR DEVELOPER; ANITA AUTOMATION, A235
1	UNLOADER – REGULAR DEVELOPER – RICH AUTOMATION INC., AC50
1	LOADER – INNER LAYER EXPOSING; SYSTEM DIV INC., MKX2
1	UNLOADER – INNER LAYER EXPOSING
1	LOADER – LAMINATOR #1; RECO LOADERCE
1	UNLOADER – LAMINATOR #1
1	LOADER – LAMINATOR #2; AMTECH
1	UNLOADER – LAMINATOR #2
SCREENING DEPARTMENT	
1	COMPLETE SCREEN MAKING FACILITIES
2	DP-1500 DUAL SIDE SCREENING MACHINES.
2	ARGUS LPI SOLDER MASK SPRAY COATER WITH CONV. LOADER & UNLOADER
1	CONVEYORIZED FINAL BAKING OVEN
1	AUTOROLL-EXACTRA 360 SCREENING MACHINE
1	AUTOROLL-EXACTRA 360 SCREENING MACHINE
2	BASSI THERMO MATIC 4.8 CONVEYORIZED CURING OVEN.
1	GRIEVE ELECTRIC OVEN 70" X 70"
1	POLYCOP VACUUM EXPOSING UNIT 50" X 60"
1	SVECIA SQUEEZE SHARPENER
1	PEM Planarizer (SANDING MACHINE)
1	ARGUS IR FINAL BAKING OVEN
1	ISHII HYOKI JET SCRUBBER
1	LOADER – LPI DEVELOPER; ANITA AUTOMATION, A230
1	UNLOADER – LPI DEVELOPER; ANITA AUTOMATION, D24F
1	LOADER – JET SCRUBBER, KSL (KUTTLER), RL102
1	UNLOADER – JET SCRUBBER; KSL (KUTTLER), RUE 102
HOT AIR LEVELING	
1	CUSTOM CRAFTED STAINLESS STEEL POST CLEANING SYSTEMS
1	UNLOADER; IBIDEN CIRCUITS OF AMERICA SERIAL #200207
3	LANTRONIC HOT AIR SOLDER LEVELING SYSTEM

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INSPECTION/TESTING DEPARTMENT	
1	MANIA ACCELER8 SCANNER
2	MEIKO AUTOMATIC HOLE INSPECTION SYSTEMS WITH LOADER/REJECTER/UNLOADER.
3	MICRO CRAFT - MP 220, FIXTURELESS FLYING PROBE BARE BOARD TESTER
1	MICRO CRAFT- ELX6146, FIXTURELESS MOVING PROBE BARE BOARD TESTER
2	MANIA PROBOT 80880-05 FLYING BARE BOARD TESTER
3	MANIA VERSA TOWER, ELECTRICAL BARE BOARD TESTER
3	MANIA BUDGET, ELECTRICAL BARE BOARD TESTER
1	CAMTEK ORION 604-HR2 INNER/OUTER LAYER INSPECTION SYSTEM
1	MANIA TECHNOLOGIES T8T DTSX INNER/OUTER LAYER INSPECTION SYSTEM
1	MULTILINE POST-ETCH PUNCH
1	HI POT TESTING MACHINE
1	POLAR CITS 500 IMPEDENCE VERIFIER
FABRICATION	
3	EXCELLON MARK VI ROUTING MACHINE – 18’ X 24’ PANEL
5	EXCELLON MARK V ROUTING MACHINE – 18’ X 24’ PANEL
2	ACCU SCORE LABS AS 2000 I SCORING MACHINE
1	BEVELMASTER TWO-SIDE CHAMFER
1	OPTICAL GAGING MACHINE (OGP)
1	CO-ORDINATE MEASURING MACHINE (CMM MACHINE)
MULTILAYER EQUIPMENT LIST	
1	DEPINNER
1	OEM 150 TON (30 X 30) 6-OPENING, VACUUM WITH COOLING UNIT & AUTO LOAD/UNLOAD LAMINATION PRESS
1	LAUFFER LAMINATION PRESS WITH GWK THERMOTRON TEMPERATURE CONTROL SYSTEM.
1	HALL MULLER DES line (WITH DUAL CHAMBER STRIPPER AND THREE CHAMBER ETCHER)
1	MULTILINE TECHNOLOGY AUTOMATIC IMAGE ARTWORK PUNCH.
1	AUTO ETCH BACK LINE.
1	HALL-MULLER COBRABOND LINE
1	CECO OVERARM MICROMETER
1	REFRIGERATOR FOR STORING PREPREG WITH HUMIDITY AND TEMPERATURE CONTROLLER
Q.C. LAB	
1	COMPLETE FACILITY PERFORMING ALL TESTS RECOMMENDED BY IPC-600 CLASS –III STD.
2	CMI THRU HOLE COPPER THICKNESS MEASUREMENT
1	MICRO POINEER XRF SURFACE COATING MEASURING SYSTEM
1	STEAM AGING SYSTEM MODEL ST-2 ROBOTIC PROCESS SYSTEM FOR SOLDERABILITY AGING TEST
1	UNIMET, UNITRON 8831: CAMERA AND HITACHI CCTV CAMERA AND MONITOR FOR FULL CROSS SECTIONAL ANALYSIS
1	PERKIN ELMER 2380 ATOMIC ABSORPTION SPECTROPHOTOMETER
1	IONOGRAPH 500 M BY ALPHA METALS - IONIC CONTAMINATION MEASURING UNIT
1	ECOMET 4 AND AUTOMET 2 VARIABLE SPEED GRINDER-POLISHER AND POWER HEAD FOR CROSS-SECTION
1	BUEHLER ISOMET LOW SPEED SAW
1	U.V. SPECTRONIC® SPECTROPHOTOMETER

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1	PH METER
1	AE-160 METTLER DIGITAL WEIGHT MACHINE
1	ELECTRO MECHANO PUNCHING MACHINE
1	DC POWER SUPPLY
1	VACUUM / PRESSURE STATION
1	MIDWEST PACIFIC IMPULSE HEAT SEALER
1	ION CHROMATOGRAPHY SYSTEM
1	THERMOTRON MACHINE FOR THERMAL SHOCK TEST
	WASTE TREATMENT PLANT
1	COMPLETE ION EXCHANGE WASTE TREATMENT SYSTEM, CAPACITY 80 GALLONS PER MINUTE.
	SHIPPING
1	CHEMCUT WASHER & DRYER

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