OPERATOR'S MANUAL

MODEL 1403 / 1002B

NIM CRATE AND POWER SUPPLY

Revised
March , 1994

(FAN 2003)

TABLE OF CONTENTS

GENERAL INFORMATION

PURPOSE

This manual is intended to provide instructions regarding the setup and operation of the covered instruments. In addition, it describes the theory of operation and presents other information regarding its functioning and application.

The Service Documentation should be consulted for the schematics, parts lists and other material that apply to the specific version of the instrument as identified by its ECO number.

UNPACKING AND INSPECTION

It is recommended that the shipment be thoroughly inspected immediately upon delivery. All material in the container should be checked against the enclosed Packing List and shortages reported promptly. If the shipment is damaged in any way, please notify the Customer Service Department or the local field service office. If the damage is due to mishandling during shipment, you may be requested to assist in contacting the carrier filing a damage claim.

WARRANTY

LeCroy warrants its instrument products to operate within specifications under normal use and service for a period of one year from the date of shipment. Component products, replacement parts and repairs are warranted for 90 days. This warranty extends only to the original purchaser. Software is thoroughly tested, but is supplied "as is" with no warranty of any kind covering detailed performance. Accessory products not manufactured by LeCroy are covered by the original equipment manufacturers warranty only.

In exercising this warranty, LeCroy will repair or, at its option, replace any product returned to the Customer Service Department or an authorized service facility within the warranty period, provided that the warrantor's examination discloses that the product is defective due to workmanship or materials and has not been caused by misuse, neglect, accident or abnormal conditions or operations.

The purchaser is responsible for the transportation and insurance charges arising from the return of products to the servicing facility. LeCroy will return all in-warranty products with transportation prepaid.

This warranty is in lieu of all other warranties, express or implied, including but not limited to any implied warranty of merchantability, fitness or adequacy for any particular purpose or use. LeCroy shall not be liable for any special, incidental or consequential damages, whether in contract or otherwise.

PRODUCT ASSISTANCE

Answers to questions concerning installation, calibration and use of LeCroy equipment are available from the Research Systems Division Customer Services Department, 700 Chestnut Ridge Road, Chestnut Ridge, New York 10977-6499 (914) 578-6030 or your local field service office.

MAINTENANCE AGREEMENTS

LeCroy offers a selection of customer support service. For example, Blue Ribbon service provides guaranteed three-day turn around on repairs, a direct access number for product application assistance, yearly calibration and the addition of engineering improvements. Maintenance agreements provide extended warranty that allows the customer to budget maintenance costs after the initial warranty has expired. Other services such as installation, training, on-site repair and addition of engineering improvements are available through specific Supplemental Support Agreements. Please contact the Customer Service Department or the local field service office for details.

DOCUMENTATION DISCREPANCIES

LeCroy is committed to providing state-of-the-art instrumentation and is continually refining and improving the performance of its products. While physical modifications can be implemented quite rapidly, the corrected accompanying product and the schematics in the Service Documentation. There may be small discrepancies in the values of components for the purpose of pulse shape, timing, offset, etc., and, occasionally, minor logic changes. Where any such inconsistencies exist, please be assured that the unit is correct and incorporates in the most up-to-date circuitry.

SOFTWARE LICENSING AGREEMENT

Software products are licensed for a single machine. Under this license you may:

- Copy the software for backup or modification purposes in support of your use of the software on a single machine.
- Modify the software and/or merge it into another program for your use on a single machine.
- Transfer the software and the license to another party if the other party accepts the terms of this agreement and you relinquish all copies, whether in printed or machine readable form, including all modified or merged versions.

A T T E N T I O N

CRATE POWER SHOULD BE TURNED OFF DURING THE INSERTION AND THE REMOVAL OF A UNIT TO AVOID POSSIBLE DAMAGE CAUSED BY MOMENTARY MISALIGNMENT OF CONTACTS.

SEE POCKET IN THE BACK OF THIS MANUAL FOR ADDITIONAL ADDENDA WITH ANY CHANGES TO THIS MANUAL.

A T T E N T I O N

LeCroy

1403 HIGH POWER NIM BIN AND POWER SUPPLY

- 200 W Maximum Power Output
- Bus Bar Power Distribution
- Thermal Protection
- Short Circuit Proof
- Over-voltage Protection On All Supplies
- Heavy Duty Chassis

EXTRA POWER FOR HIGH DENSITY APPLICATIONS

Modern experiments place ever increasing demands on the power capabilities of the NIM bin. The LeCroy Model 1403 is a high power NIM bin and power supply which provides high current versions of all voltages specified by the NIM Standard: ±6 V, ±12 V, and ±24 V. The power supply can produce up to 200 W, far in excess of the 96 W minimum specified by the NIM Standard. Additionally, over-voltage protection has been provided for all six supplies at levels which meet or exceed NIM standards.

The heavy duty NIM chassis employs cast metal rails, an improved mounting for the power supply and printed circuit board power buses for distribution of all six supply voltages and ground. This design minimizes resistive drops in the chassis which could lead to rate effects in some analog circuits. Front-panel test points are provided to monitor all six voltages.

Cool reliable operation of the power supply is assured by forced air cooling, integral to the unit. In the event of an over-temperature condition, the supply shuts down. A warning of over-temperature conditions is indicated by a pilot light on the front panel of the NIM chassis which is illuminated when the operating temperature comes within 15°C of the shut down point.

Corporate Headquarters: 700 Chestnut Ridge Road, Chestnut Ridge, NY 10977-6499, USA. Tel: (914) 425-2000 TWX: 710-577-2832

SPECIFICATIONS

OUTPUTS

Maximum Power: 200 W total of ±6 V, ±12 V, ±24 V and 115 VAC.
Maximum Current:

+6 V	-6 V	+12 V	-12 V	+24 V	-24 V	115 VAC
10 A	10 A	6 A	6 A	2 A	2 A	1 A

PERFORMANCE

Ripple: 3 mV peak-to-peak (50 MHz bandwidth).
Regulation: ±(0.01% +0.5 mV) line or load (measured at the voltage sense leads).
Temperature Coefficient: < 100 ppm/°C.
Long Term Stability: < 0.1%/24 hours at constant load temperature. Measured after 1 hour warm-up.
Response Time: Settles to within 0.1% of final value in less than 50 µsec for 10% to 100% load change.

GENERAL

Over-Current Protection: Protected against overloa by current limit circuit; short circuit proof.
Over-Voltage Protection: The 6, 12 and 24 V supplies will not exceed 7.25, 14.5 or 29 V (respectively) for longer than 15 msec.
Thermal Protection: Thermal sensor in the power supply shuts down the unit in the event of thermal overload. Front-panel thermal overload light indicates warning of an over-temperature condition. Warning light illuminated at 98°C ±5%. Shutdown occurs at 115°C ±5%.
Operating Range: 5°C to 60°C. Output current decreases 2%/°C from 50°C to 60°C.
Input Voltage: 115/230 VAC ±10%; 47 to 65 Hz.
Dimensions: 19" Rackmount, 8-3/4" height, 21-1/4" depth.
Weight: 47 lbs.

Note: Separate chassis (Model 1403-1) and power supply (Model 1002B) are available. Please contact LeCroy for more information.

SECTION 2

Product description

The model 1002B NIM Power Supply provides +/- 24V at 2A, +/- 12V at 6A and +/-6V at 10A for use by modules plugged into the 1403 NIM BIN. The total power capability is 200 W, which is available for any combination of the 6 voltage outputs.

These NIM power supply voltages are derived from 6 independent positive power supplies with the appropriate outputs connected internally to the proper return buss. Since the circuits are independent of each other no output voltage is a function of the condition of any other output voltage.

All voltages incorporate overcurrent and overvoltage protection so no damage to the power supply will result from a continuous short circuit or overvoltage condition. A thermal warning and thermal cut-off are provided to protect the power supply should the internal temperature exceed safe limits.

LED indicators for each output are located on the PC board housed in the 1002B chassis. Lights on the front panel of the 1403 NIM crate indicate power on and thermal warning conditions.

The model 1403 NIM BIN contains the AC power switch, Bin gate connector, 12 module power and bin gate connectors and all associated power distribution wiring. Also contained on the front panel of the 1403 is the AC power indicator light and Temperature warning light. Seven test points are available (common and the 6 output voltages) for purposes of monitoring the condition of the power supplies.

SECTION 3

Installation

After removing the Model 1002B or 1403 from it's package, it is ready for use. No electrical or mechanical adjustments are necessary. A parts list and schematic are in the back of this manual.

Electrical

The NIM Power Supply is furnished with a square shaped, 23 position bin interface connector which mates with a similar connector on the NIM bin. If the bin is also keyed, then the user should remove one plug in order for the connectors to mate properly.

Mechanical

Captive hardware located at either end of the unit permit the power supply to be mounted at the rear of the NIM bin.

Section 4

Operating Instructions

MODEL 1002B

Over voltage Protection

It is possible that the over voltage or current limit circuits will be activated by connecting loads when the power supply is on. Although no damage will result to the power supply it will be necessary to turn the AC power off for approximately 10 seconds to reset the crowbar or current limit circuits. Inserting or removal of modules should be done only when the AC power is off.

The over voltage protective circuits incorporate an SCR which will activate before the voltages exceed the specified crowbar points. The SCR's protect the circuitry to which power is being supplied from excessive voltage due to power supply failure, wiring error, or high voltage transients. If the crowbar is activated because of power supply failure and the current limiting circuitry is inoperative, excessive current will be drawn through the SCR and the AC fuse will blow.

Overload and short circuit protection

Overload protection is provided by a current limiting circuit contained internally to the voltage regulators used throughout the design. The current limiting circuits for the +/-12V and +/-24V will become active when the regulators try to operate outside of their safe operating area. This will be approximately 7 amps for the +/-12V and 3.5 amps for the +/- 24V. Removal of the short or over current condition will return the supply to it's nominal voltage. The current limit point for the +/-6V is approximately 18 amps. Due to this rather high current limiting point these regulators will shut down when 18 amps is exceeded requiring AC power to be cycled off then on for 10 seconds to return the supply to it's nominal output voltage.

Thermal Overload

Two thermostats are mounted on the power transistor heat sink to protect the Nim Power Supply against thermal overload. The warning thermostat will activate when the heatsink temperature exceeds approximately 98 degrees C +/- 5%. The thermal shutdown thermostat will activate at approximately 115 degrees C +/- 5% and will disconnect AC power to the NIM Power Supply. The thermostats will automatically reset themselves when the heatsink temperature returns to an acceptable level.

Voltage Adjustments

Six individual user voltage adjustments are provided by pots accessible via the 1002B's rear panel. The allowable adjustment range is approximately 5%.

Bin Gate

The Bin Gate BNC type connector is located toward the lower right side of the 1403 Nim BINS front panel. The Bin Gate connection is bussed to each of the 12 individual NIM stations within the crate. The Bin Gate's function is defined by the modules installed in the individual NIM crate positions and may be either an input or outpu

AC Power indicator

The AC power indicator light will be on when AC power is applied t the NIM power supply. It will not be on when a thermal fault has caused the over temperature thermostat to open.

Thermal warning light

The thermal warning light will light when the power supply's internal temperature has risen to within 20 degrees C of a safe operating temperature. In the case of the 1002B, this temperature will be 98 degrees C and is monitored at the power supply's heatsink.

Voltage testpoints

For the users convenience seven front panel test points (common & voltages) are available on the model 1403 NIM crate for the purpos of monitoring the crate's backplane voltages.

SECTION 5

TECHNICAL DESCRIPTION

General principles of operation

The schematic diagram for the 1002B-3 shows the interconnections between the power input, transformer, +/-6V bridge rectifiers and fan. The 1002B-1 schematic shows all circuitry for filtering, regulation crowbar and current limiting.

Transformer T1 is used to provide power for all six power supplies. In each case, a full wave rectifier is used with filtering to provide a maximum of 10% ripple at the input to the power regulation circuit. The rectifiers for the +/- 6V are mounted to the power supply chassis in order to provide maximum heat dissipation. All other bridge rectifiers and active components are located on the 1002B-1 main PC board.

All six power supplies have their own dedicated transformer windings and are all positive "floating" supplies with the appropriate side (+ or -) connected to the return line. This technique greatly simplifies design and servicing demands.

+/-6V Power supplies
The + six volt raw DC power is obtained through J11-4 and filtered by a 25000 MFD electrolytic capacitor (C31) and presented to the inputs of two parallel, LT1083 three terminal regulators (Q2 & Q3). These regulators contain the required current limit circuitry. The regulation is obtained by feeding back a sample of the output voltage to the inverting input of an LT1006 single supply operational amplifier. When this sample voltage is not equal to the 2.5 volt reference (LM336Z-2.5) the amplifier will perform the required error correction to the adjust pin of the regulator until this voltage is achieved. If a condition exists preventing the output of the + or - 6V supply from maintaining it's nominal voltage then the output of the LT1006 will become more positive than the output of the two regulators causing the + or - 6V supply to shut down. This "latchup" condition will require cycling of the AC power for approximately 10 seconds to return proper operation of the supply. Note that this condition may be caused by plugging in a highly capacitive load while the power supply is on.

+/-12V power supplies
The +/-12V power supplies are similar to the +/-6V except only one regulator is needed to obtain the required output current. Also since these supplies exhibit a safe operating current limit function closely resembling that of foldback current limiting, no "shutdown" mechanism is required. Diodes CR3 and CR4 prevent the LT1006 amplifiers from unnecessarily sourcing current into the regulators adjustment pin.

+/-24V power supplies

The +/-24V power supplies are similar to the +/-12V supplies. The major difference being the addition of a 28 volt pre-regulator circuit. The 28 volt pre-regulator circuit is necessitated due to the maximum input output voltage differential specification of the LT1085 regulators (30V). Without the pre-regulator this maximum voltage specification would be exceeded should a current limit or short circuit condition exist. The pre-regulator consists of an IRF531 power mosfet configured as source follower with the gate voltage obtained from the peak AC transformer output. This voltage is then limited using a 33V zener diode (CR6 & CR8). The 24 volt supplies also use a lower current version power regulator (LT1085 instead of LT1083).

Over-voltage "Crowbar" circuit

Over voltage protection is a feature added to protect the module or supply from damage in the event of an overvoltage condition due to supply failure, module mis-wire or module failure etc. The over-voltage circuits are all identical to one another differing only in the resistor values used to determine the trip point. This circuit incorporates an MC3423 crowbar I.C. used in conjunction with an SCR When the voltage at pin 2 of the 3423 exceeds approximately 2.6V fo more than 12 mS (time determined by 1 uF cap) then the output of th 3423 goes high causing the SCR (Q23, 24) to conduct and remain in conduction until AC power is cycled.

TECHNICAL INFORMATION

(PARTS LIST, SCHEMATICS)

PART NUMBER	DESCRIPTION REMARK	QTY PER
103447105	CAP CERA MONO 100V 1 UF C19 C21 C23 C25 C27 C29	6
106443471	CAP CERA MONO 470PF C2 C5 C8 C11 C14 C17	6
142824685	CAP TANT DIP CASE 6.8 UF	2
146634106	CAP MINI ALUM 20% 10 UF C1 C3 C4 C6 C7 C9 C10 C12 C13 C15 C16 C18 C20 C22 C24 C26 C28 C30	18
146754470	CAP MINI ALUM 20% 47 UF C35 C38	2
148376259	CAP ALUM METAL CAN 25000 UF C31 C32	2
148576798	CAP ALUM METAL CAN 7900 UF C33 C34	2
148774338	CAP ALUM METAL CAN 3300 UF C37 C36	2
161225102	RES CARBON FILM 1 K R4 R7 R12 R24 R27 R32 R46 R48 R50 R56 R59 R60 R75 R77 R79 R87 R89 R90	18
161225103	RES CARBON FILM 10 K R74 R84	2
161225105	RES CARBON FILM 1 MEG R14 R34 R69 R96 R103 R110	6
161225182	RES CARBON FILM 1.8 K R16 R36	2
161225200	RES CARBON FILM 20 OHMS R65 R66	2
161225202	RES CARBON FILM 2 K R11 R31	2
161225203	RES CARBON FILM 20 K R99 R112	2
161225303	RES CARBON FILM 30 K	2
161225363	RES CARBON FILM 36 K	4
161225392	RES CARBON FILM 3.9 K R49 R58	2
161225432	RES CARBON FILM 4.3 K	2
161225750	RES CARBON FILM 75 OHMS R100 R106	2
161225822	RES CARBON FILM 8.2 K R82 R93	2
161225911	RES CARBON FILM 910 OHMS R15 R35 R67 R94 R101 R107	6
161335101	RES CARBON FILM 100 OHMS	12

PART NUMBER	DESCRIPTION REMARK	QTY PER
161335101	RES CARBON FILM 100 OHMS R5 R9 R25 R29 R47 R57 R63 R64 R72 R78 R86 R88	12
161335102	RES CARBON FILM 1 K R19 R20 R39 R40	4
161335221	RES CARBON FILM 220 OHMS R18 R38	2
161335242	RES CARBON FILM 2.4 K R105 R111	2
161335511	RES CARBON FILM 510 OHMS R71 R98	2
161665151	RES COMP 2W 5% 150 OHMS R41 R42	2
168531393	RES PREC RN55D 1.00 K R3 R23	2
168531422	RES PREC RN55D 2.00 K R44 R54	2
168531450	RES PREC RN55D 3.92 K R76 R85	2
168531490	RES PREC RN55D 10.2 K	6
168531505	RES PREC RN55D 14.7 K	2
168531547	RES PREC RN55D 40.2 K R55 R62	2
168531581	RES PREC RN55D 90.9 K R81 R92	2
175371002	RES PWR 3W 1% .02 OHM R6 R13 R26 R33	4
180487102	RES VARI CERMET 1 K R80 R90	6
181457201	RES VARI CERMET 200 OHMS R17 R37 R70 R97 R104 R109	6
200051423	PWR SPPLY CKT MC3425P1 U2 U4 U6 U8 U10 U12	6
208011106	IC SINGLE OP AMP LT006CN8	6
208590336	IC VOLT REFERENCE LM336 Q1 Q4 Q7 Q9 Q11 Q14	6
208591083	IC VOLT REG ADJ POS LT1083 Q2 Q3 Q5 Q6 Q8 Q10	6
208591085	IC VOLT REG ADJ POS Q12 Q15	2
230110005	DIODE SWITCHING 1N4448 CR1 CR2 CR3 CR4 CR5 CR7	4
232406025	RECTIFIER BRIDGE KBPC25-02W CR18 CR19	2
235010005	DIODE RECTIFIER 1N4005 CR17 CR22	2

PART NUMBER	DESCRIPTION REMARK	QTY PER
235991750	DIODE PWR RECTIFIER GI750 CR9 CR11 CR13 CR14 CR15 CR16	6
236140010	RECTIFIER BRIDGE PH-10 CR20 CR21	2
240225707	DIODE ZENER 6.8V 1N5996A CR10 CR12	2
240513257	DIODE ZENER 33V 5% IN5257B CR6 CR8	2
256010102	DIODE LED (RED) DIFF LENS CR23 CR24 CR25 CR26 CR27 CR28	6
270110001	TRANSISTOR NPN PN2369A Q18 Q20	2
280190531	TRANSISTOR FET "N" IRF531 Q13 Q16	2
283390264	THYRISTOR 264 Q17 Q19 Q21 Q22 Q23 Q24	6
400010008	SOCKET IC SOLD TAIL DIP-8	12
402040104	WASHER INSULATING FOR TO-3P	6
405160006	CONN 6-POS SOLDER TO PC 6	1
405160012	CONN 12-POS SOLDER TO PC 12	1
405160024	CONN 24-POS FEMALE SOLDER TO PC	1
429210018	THERMOSTAT 110VAC N.O.	1
429210019	THERMOSTAT 220VAC N.C.	1
454310002	HDR DIP SOLD TO PC BD 2 J1 J2 J3 J4 J5 J6 J7 J8	8
500860302	INSULATOR FOR TO-220 HWD1	10
505019224	HEAT SINK FOR BRIDGE RECTIFIER HWD1	2
524440010	STANDOFF ROUND 4-40X1/8	6
560440004	SCREW PHILIPS 4-40X1/4 HWD1	4
560440005	SCREW PHILIPS 4-40X5/16 HWD1	10
560440006	SCREW PHILIPS 4-40X3/8 HWD1	12
560632012	SCREW PHILIPS 6-32X3/4	2
574409005	WASHER SHOULDER NYLON #4 HWD1	16
575610002	WASHER FLAT REG OD SIZE 6 HWD1	2
576410001	WASHER SPLIT LOCK SIZE 4 HWD1	10
576610001	WASHER SPLIT LOCK SIZE 6 HWD1	2
580632001	NUT HEX 6-32 HWD1	2
701002001	HEAT SINK, MACHINED 1002B-MB	1

PART NUMBER	DESCRIPTION REMARK	QTY PER
701002001	HEAT SINK, MACHINED 1002B-MB HWD1	1
711002053	PC BD PREASS'Y 1002B-MB BRD2	1

1 of report. 158 Details encountered.

PART NUMBER	DESCRIPTION REMARK	QTY PER
405161024	CONN BLOCK 24-POS MALE	1
405182006	CONN BLOCK CABLE POWR-LOC 6	1
405182012	CONN BLOCK CABLE POWR-LOC 12	1
405483014	CONNECTOR PIN (MALE) CRIMP 14 AWG	33
405483022	CONNECTOR PIN (MALE) CRIMP 22 AWG	7
405510002	CONNECTOR PIN FEMALE	15
405545001	CONNECTOR PIN (FEMALE)	7
405750012	KEYING PLUG (FOR SOCKETS)	1
455120023	BLOCK FOR FEM PINS 23	1
590001016	WIRE TEFLON 19/29 BLK 16	0
590111014	WIRE TEFLON 19/27 BRN 14	0
590111022	WIRE TEFLON 7/30 BRN 22	0
590221014	WIRE TEFLON 19/27 RED 14	0
590221022	WIRE TEFLON 7/30 RED 22	0
590331014	WIRE TEFLON 19/27 ORA 14	0
590331022	WIRE TEFLON 7/30 ORA 22	0
590541014	WIRE TEFL 19/27 GRN/YEL 14	0
590551014	WIRE TEFLON 19/27 GRN 14	0
590551022	WIRE TEFLON 7/30 GRN 22	0
590661014	WIRE TEFLON 19/27 BLU 14	0
590661022	WIRE TEFLON 7/30 BLU 22	0
590771014	WIRE TEFLON 19/27 VIO 14	0
590881014	WIRE TEFLON 19/27 GRAY 14	0
590881022	WIRE TEFLON 7/30 GRAY 22	0
590991016	WIRE TEFLON 19/29 WHT 16	0
595031105	SLEEVING SHRINK BLK 3/16"	0

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PART NUMBER	DESCRIPTION REMARK	QTY PER
195212001	VARISTOR 275V 40 JOULES	1
236230775	RECTIFIER BRIDGE J-775-2	2
407039005	CONN AC FUSE PANEL MTG	1
407039006	FUSE DRAWER 5 X 20MM 2 POLE	1
420262006	SWITCH SLIDE DPDT	1
433165005	FUSE SLO-BLO 250V 5 AMP	2
440200007	TRANSFORMER	1
485941001	GROMMET POLY CATERPILLAR	1
510110006	LOCKING TERMINAL LUG #6	1
511100217	WELDMENT ASSEMBLY 1002	1
511100219	CONNECTOR BRACKET 1002	1
530409106	FAN AXIAL 50-60 HZ 115V	1
530409994	FAN FILTER W/FOAM PAD	1
555712004	CAPTIVE SCREW 10-32 STEEL	4
560440008	SCREW PHILIPS 4-40X1/2	8
560632006	SCREW PHILIPS 6-32X3/8	11
567032005	SCREW FLAT PHIL10-32X5/16	4
567440006	SCREW FLAT PHIL 4-40X3/8	3
567632004	SCREW FLAT PHIL 6-32X1/4	12
567632012	SCREW FLAT PHIL 6-32X3/4	6
577400001	WASHER SHAKEPROOF SIZE 4	3
577600001	WASHER SHAKEPROOF SIZE 6	12
580440001	NUT HEX STANDARD 4-40	3
580632002	NUT HEX	8
589223118	CORD PWR 3-COND 7 1/2 FT	1
590001014	WIRE TEFLON 19/27 BLK 14	0
590001016	WIRE TEFLON 19/29 BLK 16	0
590331014	WIRE TEFLON 19/27 ORA 14	0
590391014	WIRE TEFL 19/27 ORA/WHT 14	0
590551014	WIRE TEFLON 19/27 GRN 14	0
590661014	WIRE TEFLON 19/27 BLU 14	0
590691014	WIRE TEFL 19/27 BLU/WHT 14	0
590991014	WIRE TEFLON 19/27 WHT 14	0
590991016	WIRE TEFLON 19/29 WHT 16	0
594120004	CABLE TIE WITH SCREW BASE	1
701002011	AIR DEFLECTION BAFFLE	1
701002101	FRAME FOR 1002B	1
701002102	ENCLOSURE COVER 1002B	1

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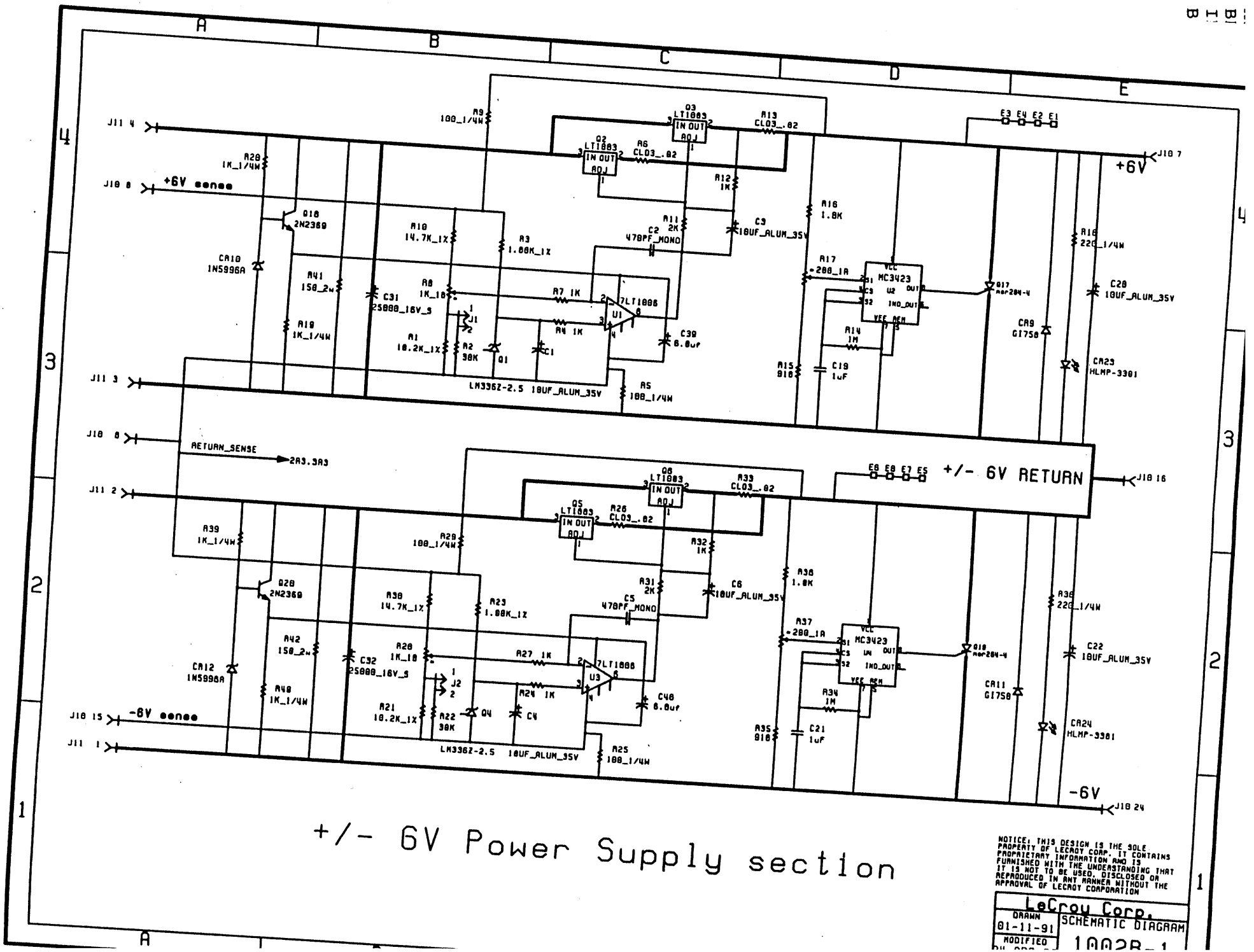

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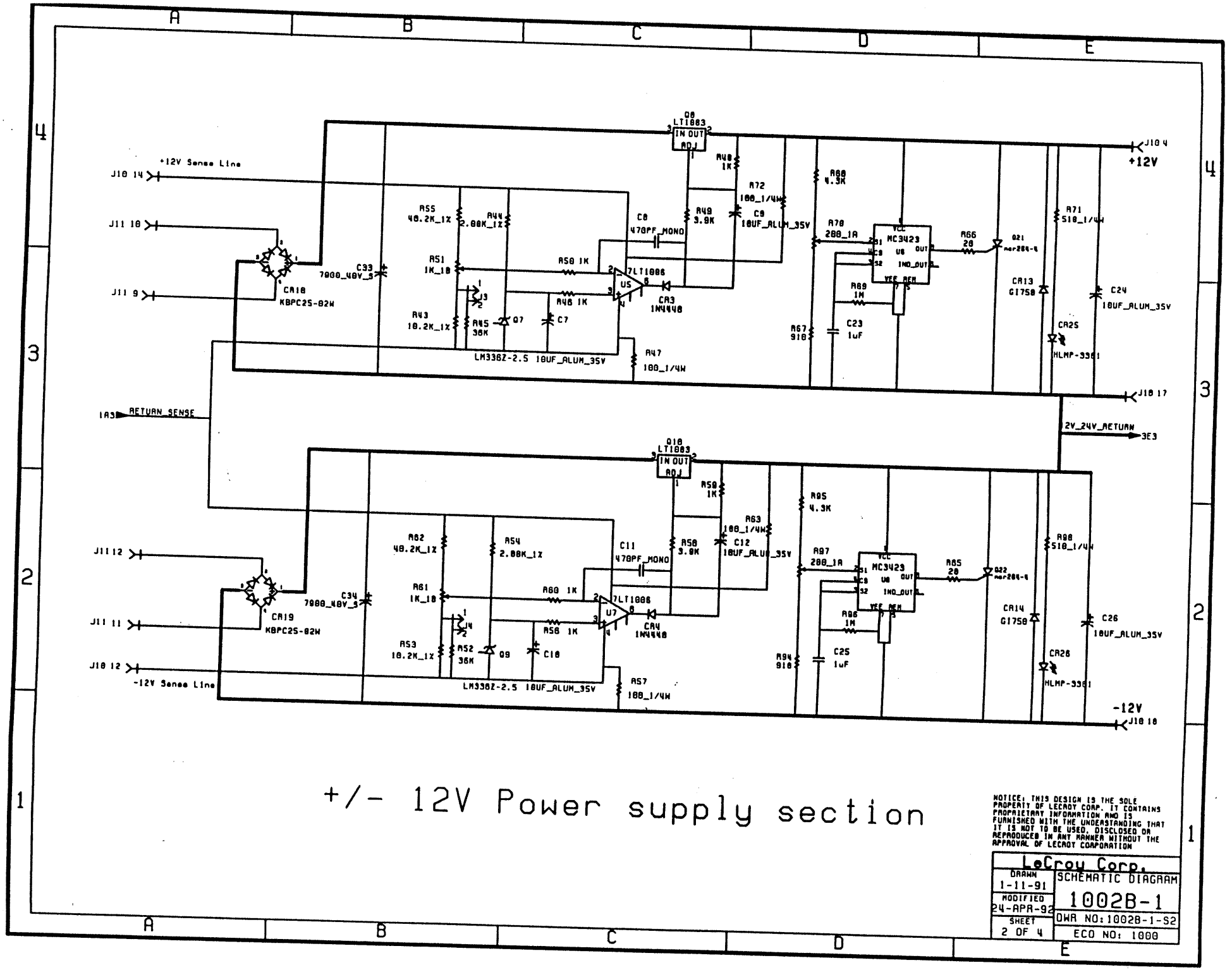
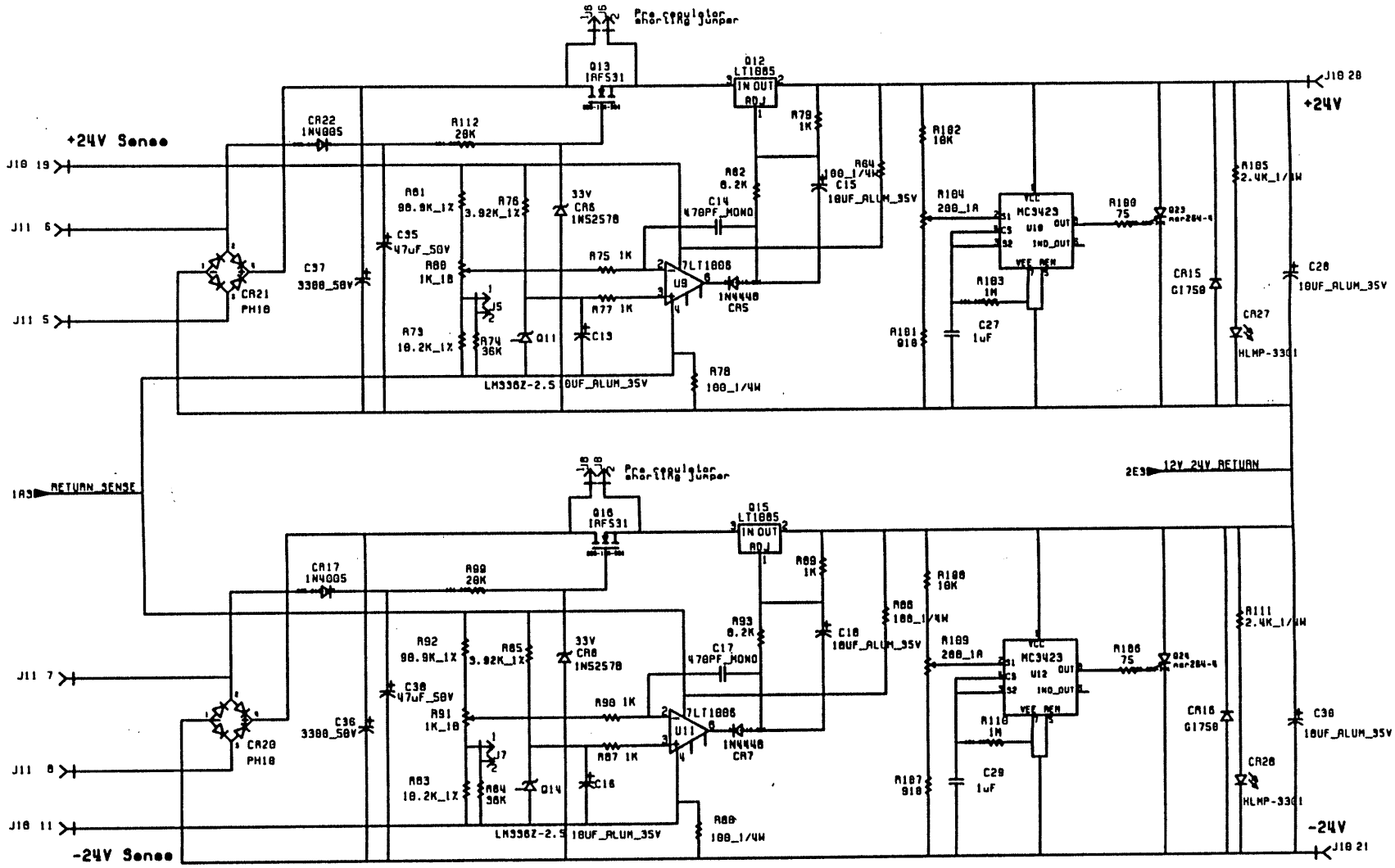


+/- 12V Power supply section

LeCroy Corp.	
DRAWN 1-11-91	SCHEMATIC DIAGRAM
MODIFIED 24-APR-92	1002B-1
SHEET 2 OF 4	DWR NO: 1002B-1-S2
	ECO NO: 1000



+/- 24V Power supply section

LeCroy Corp.	
DRAWN 1-11-91	SCHEMATIC DIAGRAM
MODIFIED 24-APR-92	1002B-1
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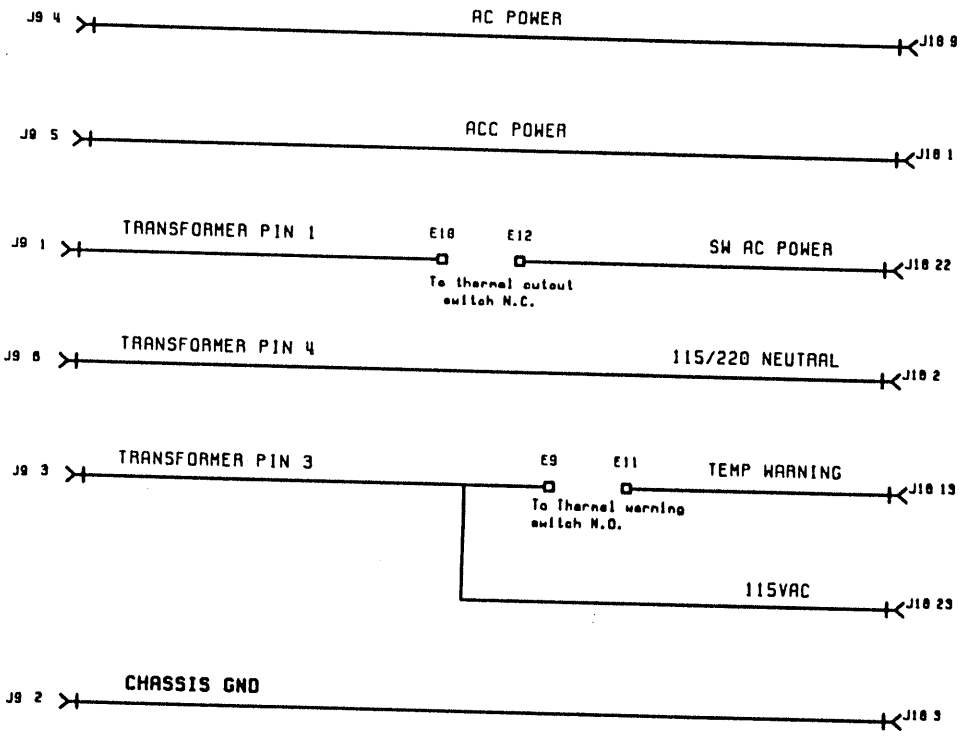
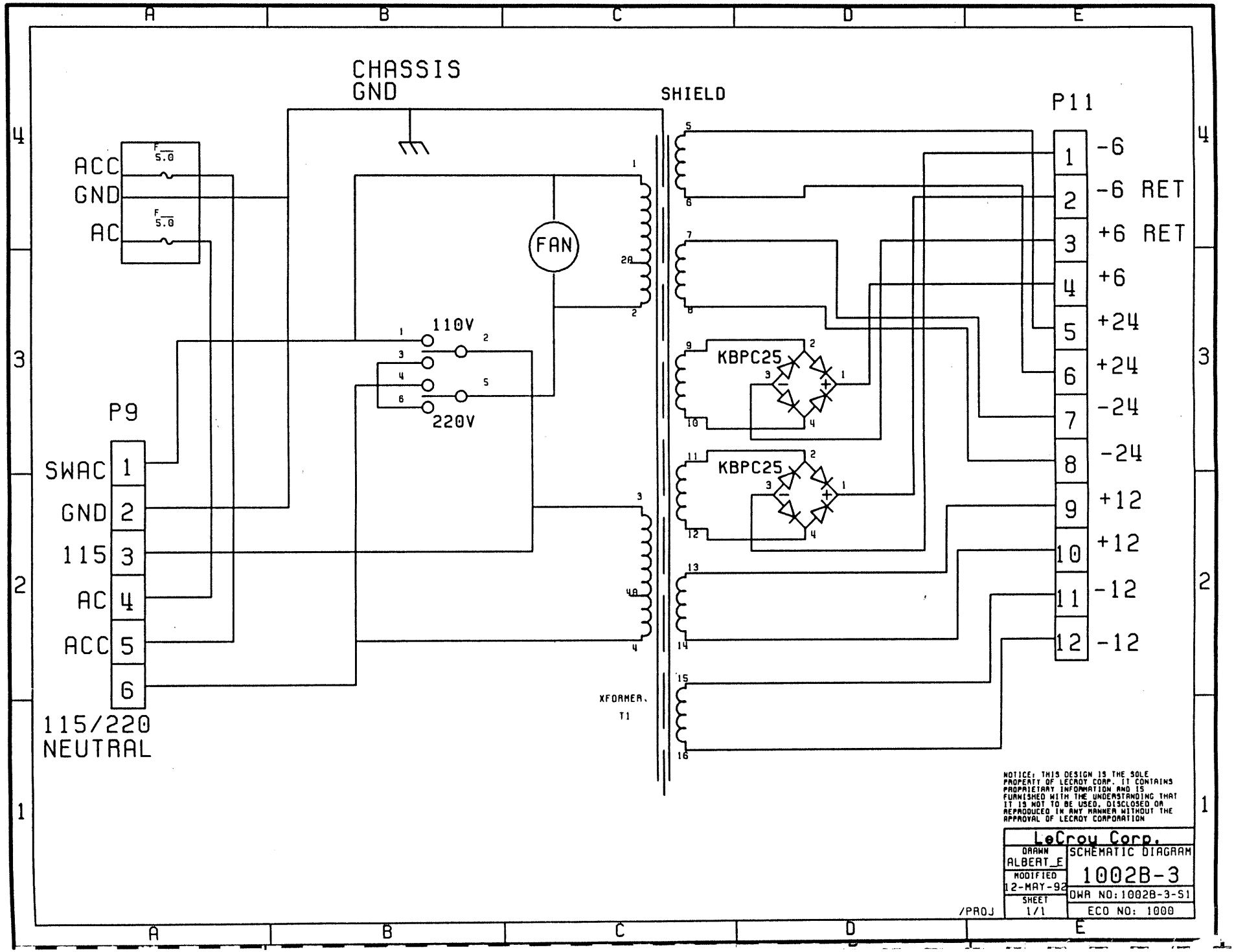
	ECO NO: 1000



AC power distribution section

LeCroy Corp.	
DRAWN 01-11-91	SCHEMATIC DIAGRAM 1002B-1
MODIFIED 24-APR-92	DWR NO: 1002B-1-S4
SHEET 4 OF 4	ECO NO: 1000


CHASSIS
GND
SHIELD
P11
ACC
GND
AC
F 5.0
F 5.0
FAN
110V
220V
P9
SWAC 1
GND 2
115 3
AC 4
ACC 5
6
115/220
NEUTRAL
KBPC25
KBPC25
XFORMER
T1
1 -6
2 -6 RET
3 +6 RET
4 +6
5 +24
6 +24
7 -24
8 -24
9 +12
10 +12
11 -12
12 -12
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LeCroy Corp.
DRAWN ALBERT_E
MODIFIED 12-MAY-92
SHEET 1/1
SCHEMATIC DIAGRAM
1002B-3
DWA NO: 1002B-3-S1
ECO NO: 1000
/PROJ