Maxima-885
CAMAC Powered Crate
2/28/84

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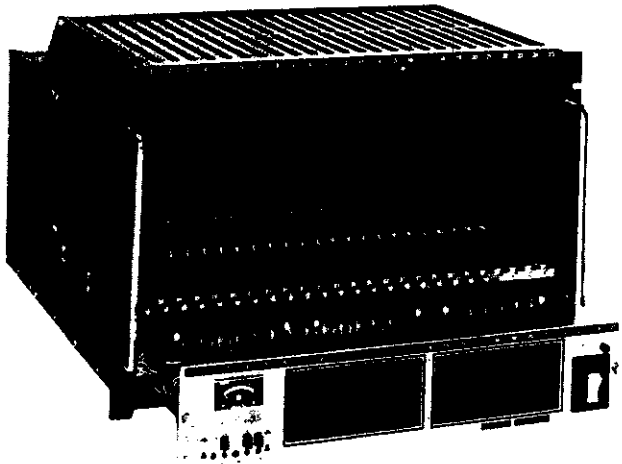
DSP TECHNOLOGY
MODEL MAXIMA 885
Powered CAMAC Crate

For highest power applications, such as transient digitizing and other high-density ECL modules, the MAXIMA 885 provides greater available total current on the +6V and +24V.
The MAXIMA 885 is without question the most powerful CAMAC crate manufactured in the United States.
The MAXIMA 885 is built to the same exacting standards as the OPTIMA 860.



POWER FEATURES

- ±6V 85 Amps shared current (to 50A maximum on either +6V or -6V)
- ±24V 12 Amps shared current (to 6A maximum on either +24V or -24V)
- ±12V to 3 Amps on either +12V or -12V (current shared with +24V)
- 600 Watts total output power
- New bottom air intake with optional air deflector and labtop mounting stand.
- New LCD front panel metering and test jacks for output voltages and currents with convenient rotary switch instead of push buttons.

GENERAL FEATURES

- Optional 6-fan blower tray with over 800 CFM rating.
- Bottom air intake maximizes the effect of the 6-fan blower (also available on 3-fan).
- Reinforced steel crate construction with cast aluminum non-galling, electroless nickel-plated module guide rails for heavy duty and long, trouble-free life.
- Modular power supply manufacturing experience has demonstrated superior reliability and performance.
- Integral support shelf and quick-release mechanism allows no-tool, single-handed power supply removal.
- Slide-out blower tray for module ventilation features low-noise, venturi-type, ball-bearing fans (3-fan standard tray with over 400 CFM rating - or optional 6-fan tray with over 800 CFM rating) combined with large air intake openings provides cooling capacity superior to all others for enhanced module performance and maximum life.
- Provides thorough protection on all circuits and outputs:
  - Overvoltage Protection
  - Overcurrent Protection
  - Thermal Protection
- Exceeds all CAMAC (IEEE 583-1982) and ESONE report, EUR 4100e, Type CP-1 power supply requirements for:
  - Regulation
  - Ripple and Noise
  - Long-Term Stability

DESCRIPTION
Model Maxima 885 Powered CAMAC Crate

The MAXIMA 885 CAMAC (IEEE Std 583, Computer Automated Measurement and Control) powered crate is an assembly made up of three basic components: the crate, the power supply, and the blower drawer.

The blower section and power supply can be removed without disturbing or removing the crate from the rack, or dismantling cabling from the modules.

The crate houses the removable blower tray, supports the power supply, and incorporates the Dataway bus. The crate assembly is constructed of reinforced steel and precision-cast aluminum upper and lower guides for long, rugged, trouble-free use. Precision-cast and machined full-depth, self-centering module-insertion guide rails insure smooth alignment of CAMAC modules with their Dataway connectors.

Over 14 years' experience in CAMAC crate power supply manufacturing goes into this new enhanced model. It features the same high-quality components and modular construction of earlier models. Rigorous quality assurance procedures and standards are followed throughout, including a 48-hour burn-in, and final test under load conditions. Additional features include, "at-a-glance" fuse visibility and a separate cooling visibility and a separate cooling system. Further, the power supply's modular construction assures ease of maintenance and minimum downtime should repair become necessary.
All outputs of the power supply are protected from overvoltage and overcurrent. No damage to the power supply results if there is a continuous short circuit. A thermal warning and a thermal cutoff switch protect the power supply whenever the internal temperature exceeds a safe limit.

The slide-out fan tray features three standard, or optional six, low-vibration, low-noise, venturi-type, ball-bearing fans rated at 134 CFM each. The large air intake openings, both on the front and below with high efficiency dust filters, current voltage metering with LCD display along with external test jacks and the power switch are design upgrades to this industry standard design. A series of options are available (see below) which make this crate the leading powered CAMAC crate on the market.

TECHNICAL SPECIFICATIONS

MECHANICAL:

Width:	19.0 in. (rack mount)
Height:	12.3 in.
Depth:	21.6 in. behind font panel
Weight:	89 lb. (shipping weight: 102 lb.)

ELECTRICAL:

Input: 115 V + 10%/-12% Vac, 50-60Hz nominal (standard), 220V optional

Output Voltage
and Current: ±6 V at 0A to 50A, current shared to 85A
±24 V at 0A to 6A, current shared to 12A
±12V at 0A to 3A current shared to 24V output

Output Power: 600W at 25°C, derated to 500W at 50°C

NOTE:

OUTPUT POWER is the sum of two groups of output voltages multiplied by their respective load currents. The sum of the two groups must not exceed 600W at 50°C and must be derated to 500W at 50°C.

GROUP 1 OUTPUTS: +6V, +24V, and ±12V combined output power and must not exceed 400W at 25°C. The ±12V output currents are considered +24V outputs for power calculations.

GROUP 2 OUTPUTS: -6V and -24V combined output power must not exceed 400W at 25°C and 375W at 50°C.

Overvoltage Protection: All output voltages are protected by silicon control rectifiers (SCR) that can be activated by ac line transients, large load-current changes, or internal circuit failure.
Overcurrent Short Circuit Protection: The outputs of the power supply are protected against over-current and short circuits by fold-back-type current-limiting circuits which causes the output current to be reduced to a low, safe value.

TECHNICAL SPECIFICATIONS (Cont.)
Model Maxima 885 Powered CAMAC Crate

Thermal Protection: Two thermal switches are mounted on each of the two heat sinks. One thermal switch on each heat sink disconnects the main power; one turns on the overload indicator on the front panel of the blower.

Metering: ±6V and ±24V and current, rotary switch selectable.

Test Jacks: All output voltages

Line and Load Regulation: ±0.2% for ±6V and ±24V outputs 2.0% for ±12V output

Ripple and Noise: 15mV peak to peak, 50MHz bandwidth, 50mV on ±12V outputs

Transient Recovery: 50 micro-seconds, typical

Long-term Stability: Less than 0.2% for 24hr. after 1 hr. warm-up (constant ambient temperature)

Temperature Coefficient: 0.02%/^{o}C maximum

ENVIRONMENTAL:

Operating Temperature: 0^{o}C to 50^{o}C (32^{o}F to 122^{o}F) at less than 90% relative humidity

Options:

1)NIM holes - Jacking screw holes for NIM modules in both upper and lower guide grills.
2)Viking blocks - set of 12 blocks accommodate 36-pin Viking card-edge connectors (required with DSP's QUANTROL E-200 series ADC Modules).
3)NIM holes and Viking blocks
4)230 Vac, 50 Hz
5)100 Vac, 50 Hz
6)Six fans
7)RM-800 rack mount power supply
8)Status monitor bit: Optimal monitoring of all outputs and thermal overloads. Provides single relay contact closure.
9)Triangle Air Deflector and Intake Duct - convenient labtop mounting.

Maxima-885
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FEATURES:

- Positive-support, quick-disconnect power supply
- Status-bit option
- Maximum air flow with venturi-type ball-bearing fans
- Partitioned fan tray for baffling air flow properly
- At-a-glance fuse visibility
- Easily replaced high-adhesion dust filters
- Separate cooling fan for power supply
- Cast-precision-machined, non-galling guides
- Self-centering module-insertion guides
- Full-depth-grill casting
- Low-vibration, low-noise operation
- Metering for voltage and current
- Overvoltage and current limiting

GENERAL DESCRIPTION:

The Maxima-885 CAMAC (IEEE-583, Computer Automated Measurement and Control) powered crate is an assembly made up of three basic units: the crate, the power supply, and the blower drawer. Unless specified otherwise in this manual, physical and electrical specifications of the Optima-860 meet or exceed the requirements of a Type CP-1 power supply and ESONE report EUR 4100e.

The crate assembly is constructed of steel and precision cast-aluminum upper and lower racks for long, trouble-free use. Only the highest quality components are employed throughout for high operational reliability. The power supply's modular construction assures ease of maintenance and minimum downtime.

The precision construction of the crate allows CAMAC modules to be inserted and removed while the power supply is on, thereby minimizing the downtime required to replace defective modules.

All outputs of the power supply are protected from overvoltage and overcurrent. No damage to the power supply results if there is a continuous short-circuit. A thermal warning and a thermal-cutoff switch protect the power supply whenever the internal temperature exceeds a safe limit.

Optional features include 6-fan blower (preferred), and a voltage monitor that provides a status bit whenever any output voltage deviates from the normal output level, or if there is a thermal overload.

TECHNICAL SPECIFICATIONS:

Mechanical:

- Width: 22.4 in.
- Height: 12.3 in.
- Depth: 21.6 in. behind front panel
- Weight: 88 lb

Electrical:

- Input:
  115 V +10%/−12% Vac, 60 Hz, standard
  230 V +10%/−12% Vac, 47 Hz to 64 Hz, optional
  100 V +10%/−12% Vac, 47 Hz to 64 Hz, optional
- Output voltage and current:
  ±6 V at 0 A to 50 A, current shared to 85 A total
  ±24 V at 0 A to 6 A, current shared to 12 A total
  ±12 V at 0 A to 3 A, current shared to 24 V output
- Output power: 550 W at 25°C derated to 500 W at 50°C

NOTE

OUTPUT POWER is the sum of two groups of output voltages multiplied by their respective load currents. The sum of the two groups MUST NOT EXCEED 550 W at 25°C and must be derated to 500 W at 50°C.

Group 1 outputs: +6V, +24V, and ±12V combined output power must not exceed 400 W at 25°C. The ±12V output currents are considered +24V outputs for power calculations.

Group 2 outputs: −6V and −24V combined output power must not exceed 400 W at 25°C and 375 W at 50°C.

- Line and load regulation:
  ±0.2% for ±6-V and ±24-V outputs
  2.0% for ±12-V output
- Ripple and noise: 10 mV peak to peak, 50-MHz bandwidth
- Transient recovery: 50 microseconds, typical
- Long-term stability: less than 0.2% for 24 hr after 1 hr warmup (constant ambient temperature)
- Temperature coefficient: 0.02%/°C, maximum
- Remote sensing: ±6-V, ±24-V outputs
- Circuit protection: fuses on pass transistors and on main ac power lines
- Overload protection: overload and overcurrent protection on all outputs
- Thermal protection: both heat sinks sensed for overtemperature; thermal overload indicator on front panel of blower; overtemperature sensor on heat sinks to cut off power
- Metering: ±6 V and ±24 V and current
- Test jacks: all output voltages

- Status-bit monitor: optional monitoring of all outputs and thermal overload overtemperature; and provides relay contact closure when limits are exceeded
- Blower air flow: over 300 cfm with unloaded crate, or over 800 cfm with 6-fan blower.

Environmental:

- Operating temperature: 0°C to 50°C (32°F to 122°F) at less than 90% relative humidity

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NOTE:

To achieve adequate cooling when running at full power, the *MAXIMA* power supply MUST be installed in a Standard Engineering Corp. crate with ventilation cutouts on both sides of the power supply.

OPERATING INSTRUCTIONS:

Installation:

Before the crate is mounted in the rack, the power supply must first be removed. After the crate is mounted, the power supply can be reinstalled as shown in drawing No. 106816, Power Supply Removal Diagram. The ac-line cord must be connected to 115 Vac, 60 Hz.

Turn-On:

The power supply must not be turned on until Dataway PG-26 has been connected to the power supply as shown in drawing No. 106816. Although no damage results from turning on the power prematurely, one or more regulators can go into overvoltage.

When the power is turned on, the amber light on the front panel of the blower comes on, and the front-panel meter indicates the proper output voltages. If any output voltage reads low, it is necessary to check the meter for current. If there is current flow, the related output is probably in overvoltage. If so, the power must be shut off for about 10 seconds. If the condition persists when the power is turned on again, the fuse(s) should be checked for that output voltage. Fuses, which are located under the cover at the rear of the power supply, are visible through a plastic window (see drawing No. 106812). A blown fuse, which usually indicates an internal circuit failure, should not be replaced without first checking pass transistors.

The maximum power is 550 W. Exceeding this maximum load can cause damage to the power supply.

Overvoltage:

All output voltages are protected by overvoltage c cuits that can be activated by ac line transients, lar load-current changes, or internal circuit failure. Wh an overvoltage circuit is activated, a silicon cont rectifier (SCR) is turned on, placing a short circ across the load. The overcurrent protection circu limit the current to a safe value. The ac power must turned off for approximately 10 seconds to deactiva the overvoltage circuit.

Overcurrent Short Circuit:

The outputs of the power supply are protected agai overcurrent and short circuits by fold-back-ty current-limiting circuits. A load beyond the current t point causes the output current to be reduced to a lo safe value.

The current trip level for each output is set appro imately 10% over the maximum current. On the ±6 outputs, the current trip level must NEVER be higher than 10% over the maximum current; oth wise, the power supply is damaged.

Voltage Adjustment:

Voltage adjustment potentiometers for the ±6-V a ±24-V outputs are located at the rear of the pow supply (see drawing No. 106812, Major Featu Callout). Each potentiometer allows a minimum a justment of 2%. The output voltage should b measured at the Dataway when making voltage a justments.

Blower Front-Panel Test Jacks:

Adjacent to the meter on the front panel of the blow are test jacks for measuring the approximate voltag of the Dataway. The test jacks must not be used measure the power supply regulation or ripple.

Thermal Overload:

Four thermal switches incorporated in the design the power supply protect it from overloads. Two these thermal switches are mounted on each of th two heat sinks.

If either heat sink overheats, one of its therm switches disconnects the main power. One therm switch on each heat sink turns on the therm overload indicator on the front panel of the blower excessive power is being drawn from the heat sink if the heatsink overheats from inadequate air flow too high an ambient temperature. The other therm switch disconnects the main power if a maximum sa heat sink is reached.

CIRCUIT DESCRIPTION:

General:

The different sections of the Maxima-885 are shown i drawing No. 106808, PCS 800 Series Block Diagram

The blower section contains the voltage and current monitoring circuitry and meter, the overtemperature indicator, the output test jacks, the ac power on/off switch, and the status-bit option. The crate houses the blower and contains the Dataway. The power supply contains all the circuitry and components for the regulated output voltages.

Drawing No. 106812 shows the location of all controls, indicators, and mechanical features.

Blower Section:

The blower section is described in drawing No. 106810, Simplifed Blower Block Diagram; drawing No. SD280100, Schematic Blower Chassis; drawing No. 288500, Assembly Meter Board; and drawing No. SD288500, Schematic Meter PCB. The blower schematic drawing shows the interconnection between the power supply and the blower and blower fans. It also shows the interconnections to the meter printed-circuit board.

The meter printed-circuit board contains the voltage-input metering switch, associated voltage-drop resistors, and calibration potentiometers R2, R3, R4, R5, and R6. R2 is set for a meter indication of 6 V when the +6-V pushbutton has been selected. Once this setting is properly made, the remaining voltages are calibrated. R3, R4, R5, and R6 are the current calibration potentiometer for ±6 and ±24 currents. These are adjusted to make the meter read the same as the load current at full load.

The status-bit option is shown on drawing No. 106565, Schematic Status Bit Option; and drawing No. 106567, Assembly PCB Status Bit Option. All voltages (±6, ±12, and ±24) are added in a precision resistor network, and the results are compared to precision voltage references. Two differential comparators monitor plus and minus output voltages. The output of the comparator drives the output relay through a relay driver circuit called Q1-Q2. Relay K1 is energized when a fault is present. R11 and R16 provide plus and minus voltage sensitivities, respectively, and are factory set to cause the status bit change when any input voltage changes more than ±1.5% from the nominal.

Power Supply:

Drawing No. BD106960, Block Diagram CAMAC Power Supply, shows the basic elements of the power supply and their relation to the crate or the blower. The two heat sinks and associated regulator printed-circuit board are subassemblies that can be removed easily.

Drawing No. SD106961, Schematic Chassis Wiring PS200/800 Power Supply, shows the interconnections for the blower, the crate, the power supply transformer, the rectifiers, the filters with associated fusing, and the fan circuitry. The drawing also shows connections to the removable heat sinks assemblies.

The outputs of the transformer T1 feed full-wave rectifiers with capacitor filtering. Drawing No. MD106947, Major Component Diagram CAMAC shows the location of all chassis components and subassemblies.

Heat-Sink Assemblies:

There are two heat-sink assemblies: the positive heat-sink assembly containing all the circuitry for +6-V, +24-V, and ±12-V outputs; and the negative heat-sink assembly containing all the circuitry for −6-V and −24-V outputs. Both heatsinks, which plug into the chassis wiring, are readily accessible for maintenance. The negative heat-sink assembly can be extended easily out of the chassis to allow for hot testing on both sides of the assembly.

Positive Heat-Sink Assembly:

Drawing No. 106962, Assembly Positive Heat Sink Power Supply CAMAC i, shows the location of all the compenents in the assembly. Drawing No. SD106963, Schematic Regulator, shows the entire circuitry of the heat-sink assembly. The heat-sink assembly contains the pass-transistor circuitry, the driver, the regulator, and the overvoltage and overcurrent circuitry for the +6-V, +24-V, and ±12-V outputs.

Each regulator circuit utilizes a precision voltage regulator integrated circuit (IC) 723, which includes a stable voltage reference and overcurrent circuitry. A voltage divider across the output of each supply feeds the precision regulator IC. The output of the regulator IC is connected to a series of driver transistors, which in turn drive the series pass transistor (no drive transistor is required in the ±12-V outputs). The precision regulator for the +6-V output derives its supply voltage from the +24 V in order to satisfy the minimum 12-V input-to-output of the regulator IC.

Each pass transistor and power driver is individually fused. These fuses, which are visible through the windows in the rear cover, are located along the outer edge of the regulator printed-circuit board for easy access and removal. The fuses are used to protect the power supply in case of a pass transistor or circuit failure. If a fuse blows, a new fuse must not be inserted until after the pass transistor has been checked. Failure to do so can lead to additional circuit failure.

The positive output overcurrent circuits utilize the precision regulator overcurrent capability. The load current is sensed by series low-value resistors whose output voltage turns on the overcurrent circuit of the regulator IC when the maximum load current is reached. Current foldback limiting is achieved in the positive regulators by R11 and R13, providing a positive feedback current to pin 2 of the regulator IC. The current limit trip point is present at the factory and should not need adjusting.

The current-limiting circuitry of the −12-V output incorporates a separate transistor Q15 that senses the voltage across the current sense resistor. When turned on because of an overcurrent, the output of Q15 shorts out the base of another pass transistor Q14. Positive feedback is provided through R75 to the current-limit sensing transistor Q15.

Both the +6-V and the +24-V outputs contain overvoltage protection sensors, which turn on the SCR crowbars if an overvoltage occurs. The +6-V and the +24-V outputs are set to crowbar approximately 7 V and 26 V, respectively. The ±12-V outputs utilize the overvoltage circuits of the ±24-V outputs by coupling through the voltage-dropping zener diodes CR1 and CR3. Once an SCR has been turned on, the power supply must be off for approximately 10 seconds to reset the SCR.

Both the +6-V and the +24-V output driver circuits incorporate frequency-shaping networks R67-C18 and R68-C19 to achieve a high degree of stability.

Negative Heat-Sink Assembly:

The negative heat-sink assembly is similar to the positive heat-sink assembly and also plugs into the chassis wiring (see drawing No. 106965, Assembly Neg Heat Sink, and drawing No. SD106966, Schematic Regulator −6 and −24 Vdc). The heat-sink assembly contains the pass transistors, the drivers, the regulators, and the overvoltage and overcurrent circuitry for the −6-V and −24-V outputs.

Because of the negative output, the precision voltage regulator U1 and U3 are operated in the inverted mode. Except for the current trip circuitry, the negative and the positive circuits are essentially the same. Whereas the positive circuits utilize the internal overcurrent circuit of the regulator IC, the negative circuits incorporate external current-limiting transistors Q8 and Q13. When the voltage across the sense resistor R11 or R32 and R33 exceeds the bias required to turn on Q8 or Q13, the base-to-emitter voltage of the drive transistor Q7 and Q12 is reduced, causing the output voltage to fall almost to zero volts. Each current trip circuit has current foldback limiting by biasing Q8 and Q13 to a more negative source.

The current-limiting trip point is preset at the factory and should not require field adjustment.

CAMAC Crate:

The crate houses the removable blower tray, supports the power supply, and incorporates the type of Dataway bus developed by the University of California Lawrence Berkeley Laboratory. Precision cast-and-machined guide rails insure the proper alignment of CAMAC modules with their Dataway connectors.

Drawing No. 106697, Dataway Wiring, shows the power buses and power-and-sense wiring to and from the Dataway.

SERVICE AND MAINTENANCE:

The modular design of the power supply (see dra No. MD106947) makes manufacturing, repair, maintenance easy to do.

If the user does not have personnel qualified to dle repairs, the defective assembly can be rem and returned to the factory. A replacement asse usually can be shipped within 24 hr.

Heat-Sink Assemblies:

The two heat-sinks are plug-in assemblies that c easily removed for replacement or repair regulator schematics drawing No. SD106963 or ing No. SD106966).

The positive heat-sink assembly is adjacent to th of the power supply, and all of its component easily accessible (see drawing No. MD106947 IC's and low-powered transistors are mount sockets. If the heat sink has to be removed, the c are first disconnected from the printed-circuit and the thermal switches, then four mounting s holding the heat sink to the base plate can b moved. Two guide pins align the heat-sink hole mounting-plate holes, making it easy to reinsta positive heat sink.

The negative heat sink is located below the po heat sink. Two guide pins extend from the mou plate through the heat sink, allowing the neg heat sink to be pulled out for live troubleshooti the extended position. all components are readi cessible. As with the positive heat sink, all integ circuits and low-powered transistors are mount sockets. A second set of support-pin holes, which trude only part way through the fins of the neg heat sink, provide a solid, fixed, and extended port for the heat sink. By sliding the heat sink o mounting guide holes and over to the troublesho holes, the heat sink is held in place in the exte position.

To extend or remove the negative heat sink, the mounting screws holding the heat sink to the plate are removed first.

NOTE

Do not test the negative heat sink under full powe except for brief moments, because the heat sink i not being properly cooled in the extended position

Fans and Filters:

The blower fans are the lifetime-lubricated type. filters should be inspected periodically and cle by immersion in soap and warm water. A filter c removed easily pulling it out from the panel; replaced by tucking it back in.

Fuses:

Fuses other than the two main line fuses protect the power supply. These fuses are in series with each pass transistor and normally do not blow unless a pass transistor or a driver transistor has shorted.

NOTE

These fuses must not be replaced without first checking for transistor shorts. To do so can result in circuitry damage.

Test Points:

Test jacks for all output voltages are provided on the front panel. Because the test jacks are connected to regulator sense leads and through 2.2 kilohm resistors, the jacks must not be used to test power-supply regulation or ripple and noise. These measurements must be made where the sense leads are terminated on the Dataway.

Voltage Adjustment:

Voltage-adjustment potentiometers are provided for each regulator on the regulator printed-circuit board. The ±6-V and ±24-V adjustments are accessible through the rear of the power supply.

Overcurrent:

The overcurrent trip points are factory set at 5% to 10% above the rated output current. The adjustment potentiometers are R33 and R66 on the positive heat sink and R12 and R34 on the negative heat sink. The ±6-V output current fold-back trip points are set by adjusting the potentiometer until the output voltage starts to drop off at 5% to 10% above the maximum load current. The ±24-V output current adjustment potentiometers are adjusted for a 0.5-A to 1.0-A current with the output shorted.

REPLACEABLE PARTS:

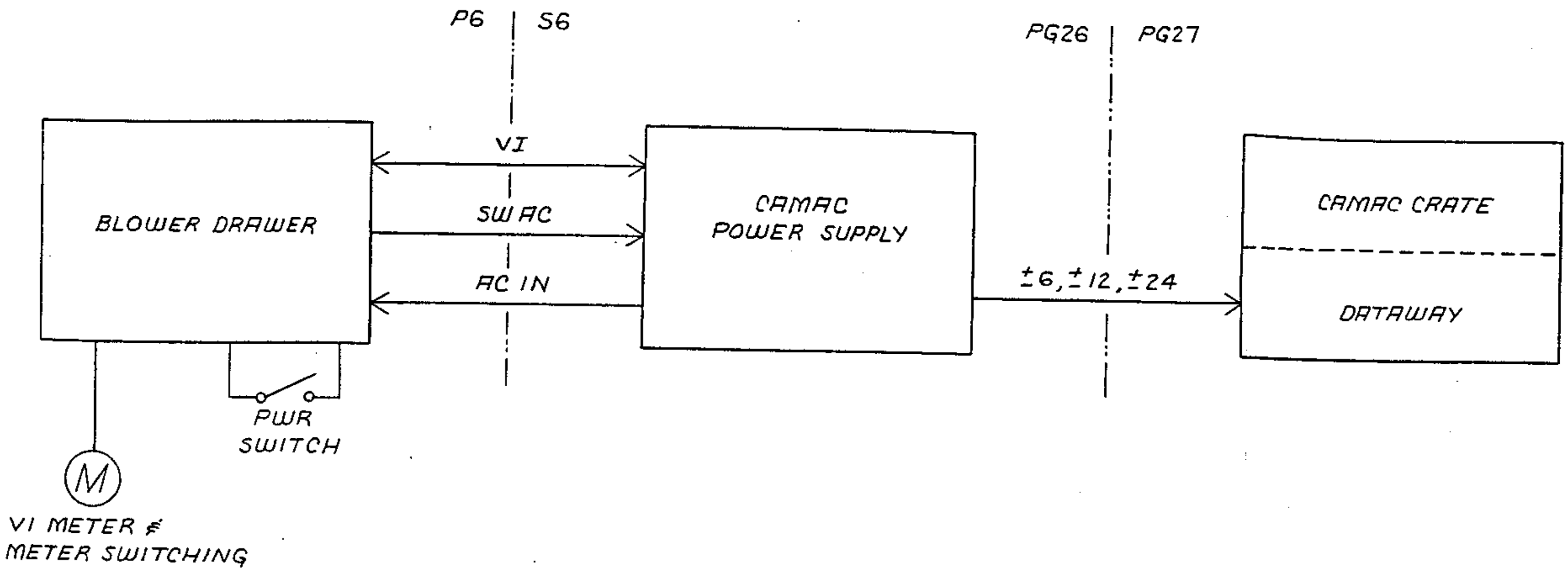
NOTE

Readily available standard componets have been used with this unit whenever possible. Special components or subassemblies, however, can be obtained directly from Standard Engineering.

When ordering parts, the information below should always be included:

- Standard Engineering part number
- Description of part, including circuit reference
- Model and serial number of unit
- Complete description, function, and location of part (if part is not listed)

Assembly No.	Assembly Name
106962	Positive Heat Sink Assembly
106965	Negative Heat Sink Assembly
288500	PCB Assembly, Meter
106567	Status Monitor Assembly Option



SYM	DESCRIPTION	DATE	APPROVAL
B	SEE DCO 009	6-1-82	

REVISIONS

FINISH ~

DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED

DECIMAL XX±. ~ XXX±. ~ ANG. ± ~

SCALE: ~ NO. REQ'D.

NEXT ASS'Y. ~

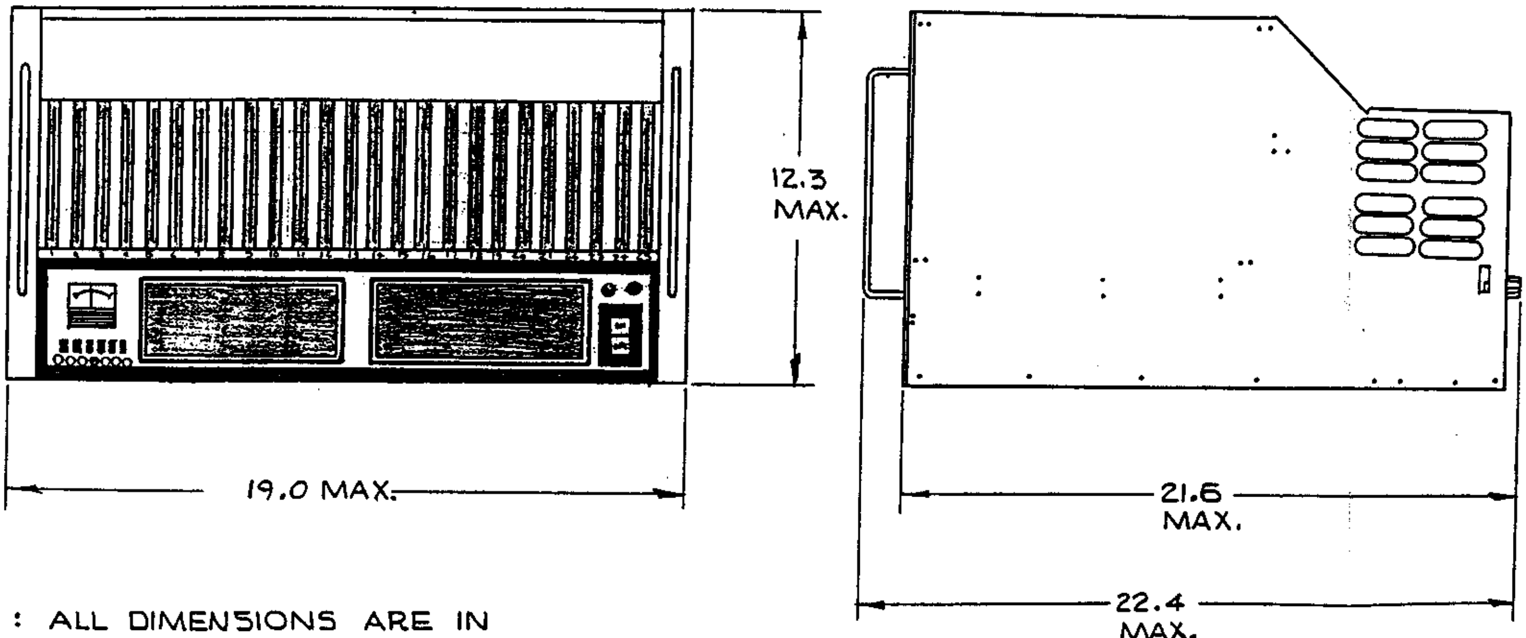
TITLE PCS BLOCK DIAGRAM

DESIGN		DATE	
DRAWN	e.c. hannett	DATE	6-1-82
CHECK		DATE	
APPRO		DATE	

DSP Technology

SIZE	DRAWING NUMBER	ISSUE
B	106808	B

SHEET 1 OF 1



NOTE : ALL DIMENSIONS ARE IN INCHES.

SYM	DESCRIPTION	DATE	APPROVAL
C	ECO # 518	4-6-84	
B	ECO 502	2/13/84	

REVISIONS

TITLE	OUT LINE DIMENSIONS CAMAC CRATE		
DESIGN		DATE	11-5-79
DRAWN	FRANK	DATE	9-14-79
CHECK	MJ	DATE	11-5-79
APPRO		DATE	11/5/79

DSP Technology

SIZE	DRAWING NUMBER	ISSUE
B	106809	C

SHEET 1 OF 1

LTR	DESCRIPTION	BY	APPROVAL	DATE
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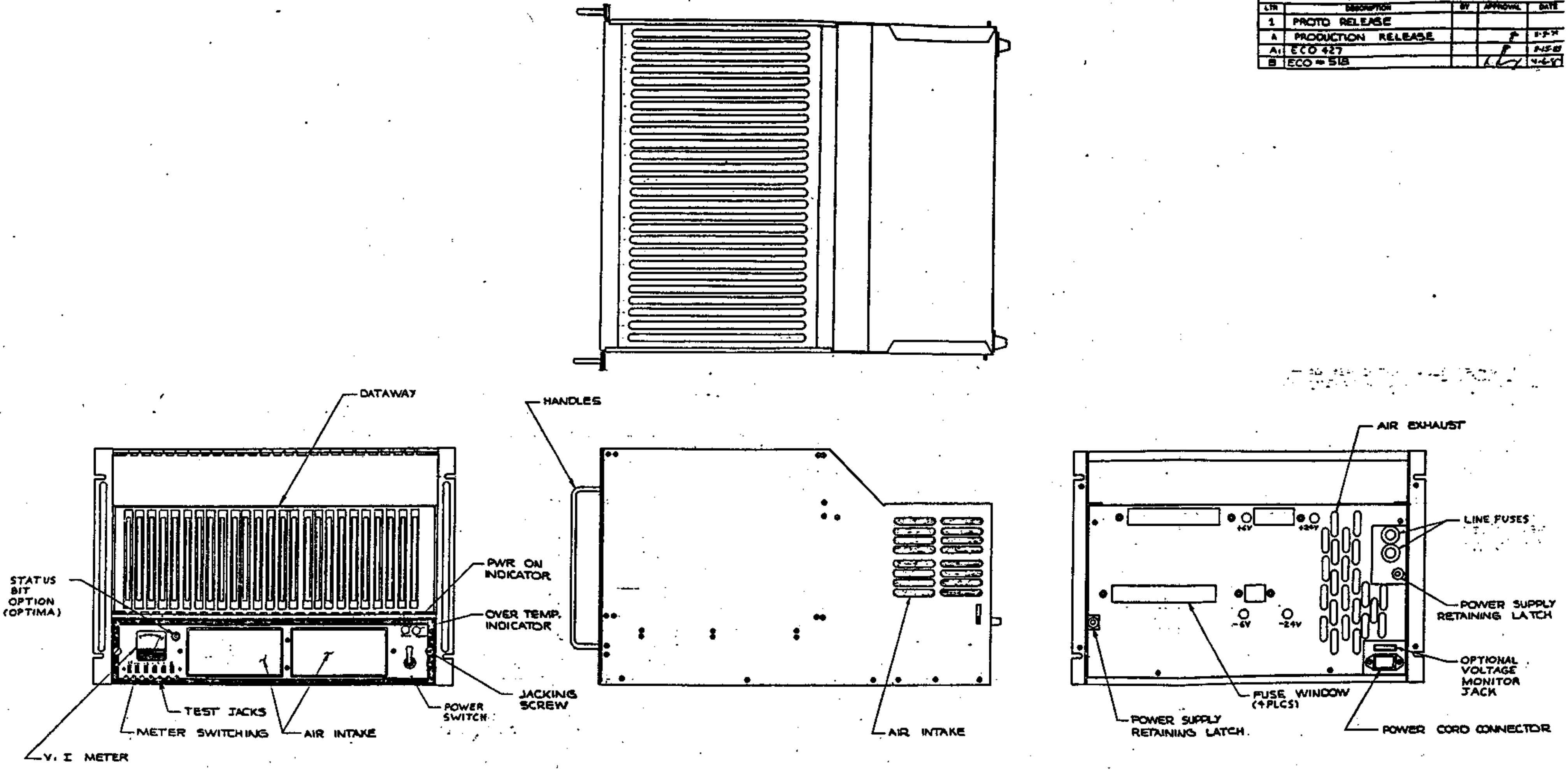
A	PRODUCTION RELEASE			[illegible]
A1	ECO 427			[illegible]
B	ECO # 518			[illegible]

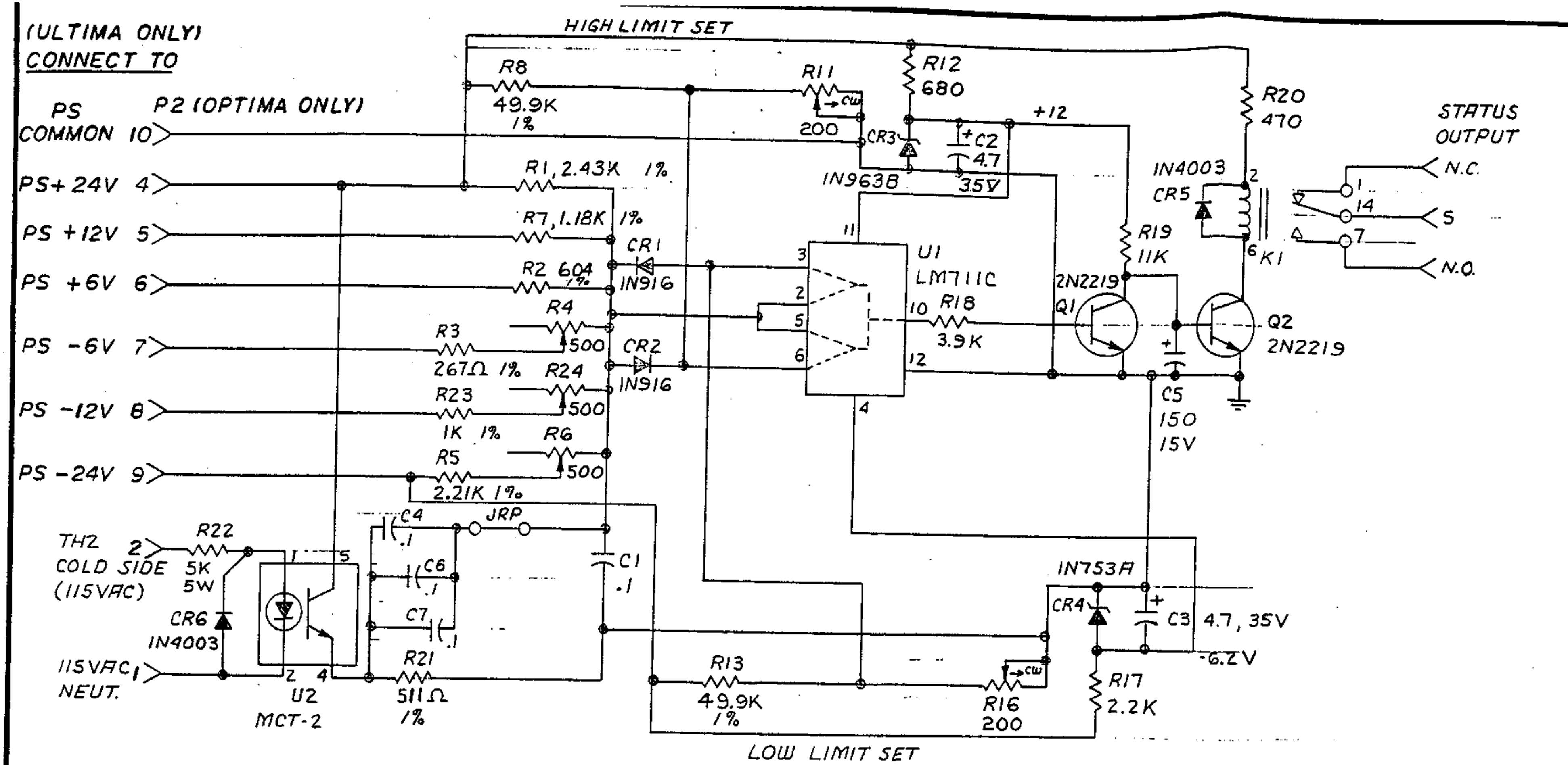


TITLE MAJOR FEATURE CALL-OUT

CAMAC PCS

DSP Technology

DESIGN	[illegible]	DATE	[illegible]
DRAWN	FRANK	DATE	[illegible]
CHECK	[illegible]	DATE	[illegible]
APPRO	[illegible]	DATE	[illegible]



SYM	DESCRIPTION	DATE	APPROVAL
C6	SEE ECO # 663	3-26-87	
C5	R1 WAS 2.43Ω IS 2.43K	8-25-83	
C4	MANUAL UPDATE, ECO 427	8-15-83	
C3	SEE ECN 1133	1-29-83	
C2	U1 WAS MC1711C, U2 WAS MCT26	3-22-82	ech
C1	C5 VALUE WAS 120, 35V	3-15-82	ech
C	REDRAWN PER ECO 196	11-2-81	

REVISIONS

FINISH ~

DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED

DECIMAL XX± ~ XXX± ~ ANG. ± ~

SCALE: ~ NO. REQ'D. ~

NEXT ASS'Y. 106717

TITLE SCHEMATIC, STATUS BIT OPTION

DESIGN		DATE	
DRAWN	e.c.hannett	DATE	11-2-81
CHECK		DATE	
APPRO		DATE	11 NOV 81

dsp Technology Inc

SIZE B DRAWING NUMBER 106565 ISSUE C6

SHEET 1 OF 1

NOTES

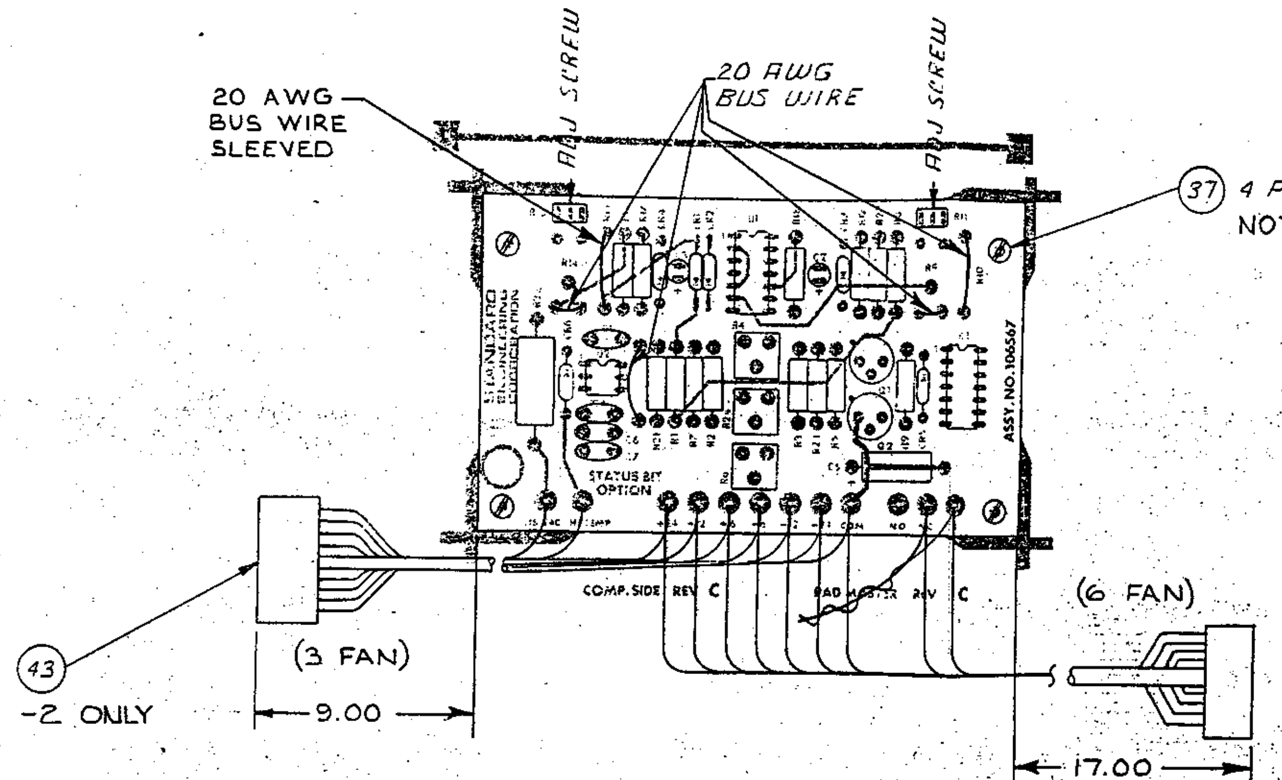
1. DO NOT MOUNT SCREWS (37), SPACERS (38) AND WASHERS (40) AT THIS TIME. KEEP WITH KIT FOR SUBSEQUENT ASSEMBLY.

CONN PIN	COLOR	P.C.B
1	BRN	AC LOW
2	RED	HI TEMP
3		
4	YEL	+24
5	GRN	+12
6	BLU	+6
7	VIO	-6
8	GRY	-12
9	WHT	-24
10	BLK	COM

−2 VERSION

LEMO

LUG	BLK	NC	13"
CENTER	RED	S	13"



SYM	DESCRIPTION	DATE	APPROVAL
C5	SEE ECO# 1001	6/1/87	m.c.
C4	SEE ECO# 590	7/15/85	
C4	SEE ECO # 575	3/11/85	
C3	SEE ECN 1133	1-29-83	
C2	ADD -2 VERSION - ITEM 43	6-9-82	ech
C1	C5 VALUE WAS 120, 35V	3-15-82	ech
C	PRODUCTION RELEASE ECO196	11-6-81	

REVISIONS

MATERIAL: SEE PL106567

FINISH: ~

DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED

DECIMAL		ANG
XX ~	XXX ~	~

SCALE 1:1 — NO. REQ'D ~

NEXT ASSY 106717

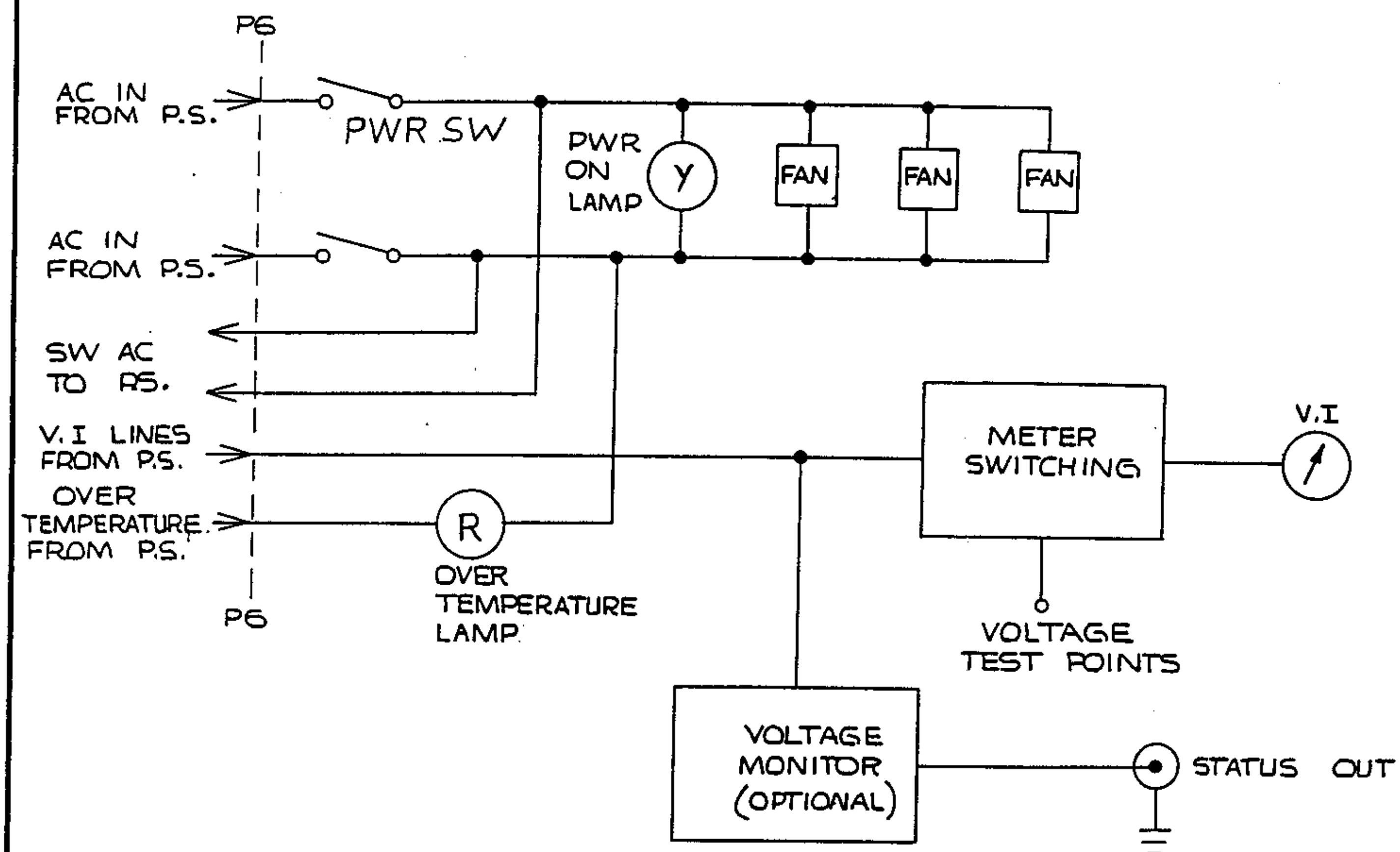
TITLE: ASSEMBLY P.C.B. STATUS BIT OPTION

DESIGN		DATE	
DRAWN	e.c.bennett	DATE	11-6-81
CHECK		DATE	
APPRO		DATE	11-6-81

DSP TECHNOLOGY INC.

SIZE	DRAWING NUMBER	ISSUE
E	106557	C5

SHEET 1 OF 1



SYM	DESCRIPTION	DATE	APPRO
B	ECO #518	4-6-84	
A1	MANUAL UPDATE, ECO 427	8-15-85	
A	PRODUCTION RELEASE	11-5-79	
2	PROTOTYPE	10-12-79	

REVISIONS

TITLE SIMPLIFIED BLOWER BLOCK DIAGRAM

CAMAC SERIES

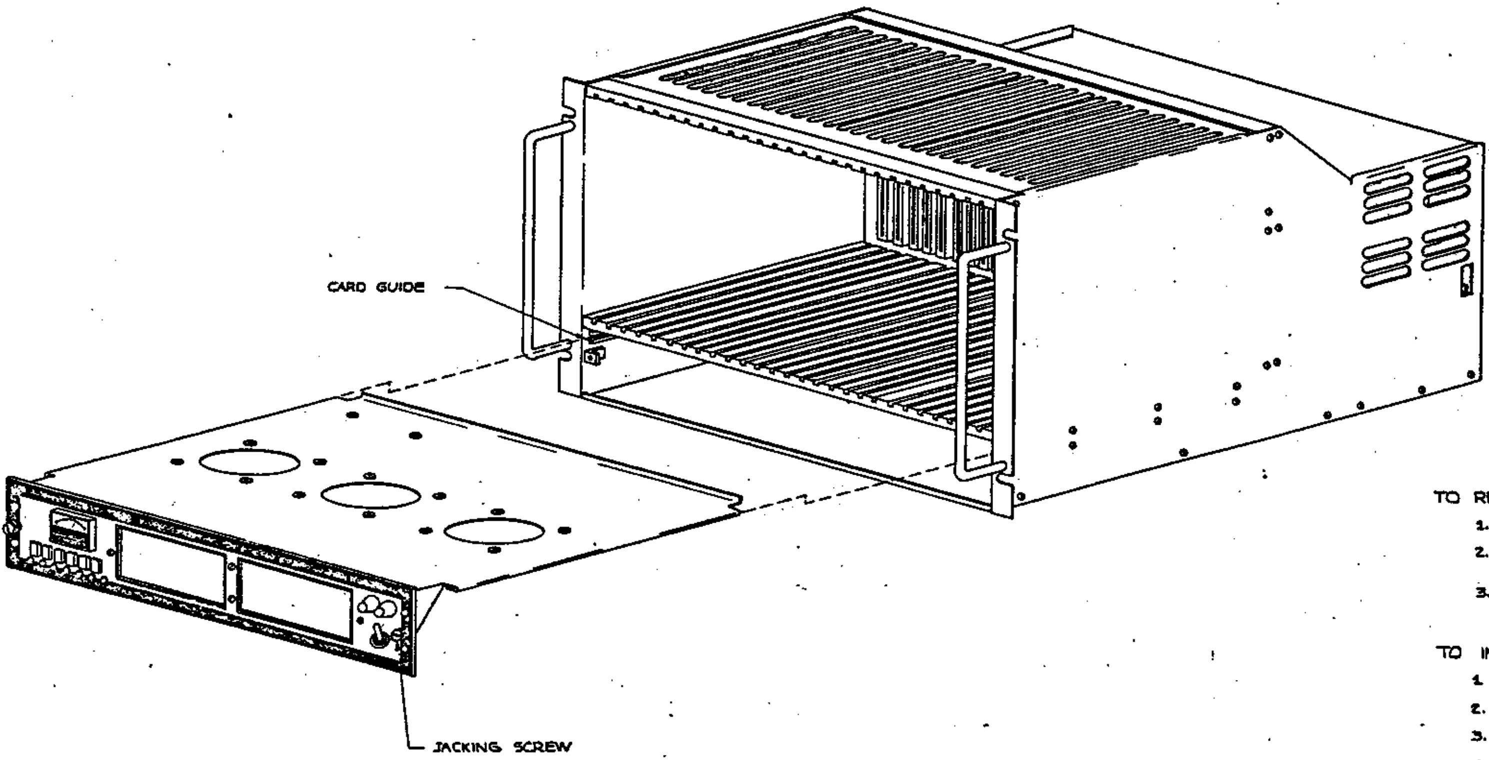
DSP Technology

DESIGN		DATE	11-5-79
DRAWN	FRANK	DATE	9-11-79
CHECK		DATE	10-12-9
APPRO		DATE	10/12/79

SIZE	DRAWING NUMBER	ISSUE
B	106810	B

SHEET 1 OF 1

REVISIONS				
LTR	DESCRIPTION	BY	APPROVAL	DATE
1	PROTOTYPE RELEASE			
A	PRODUCTION RELEASE			
A1	ECO 427-NEW SWITCH			
B	ECO # 51B			



TO REMOVE BLOWER:

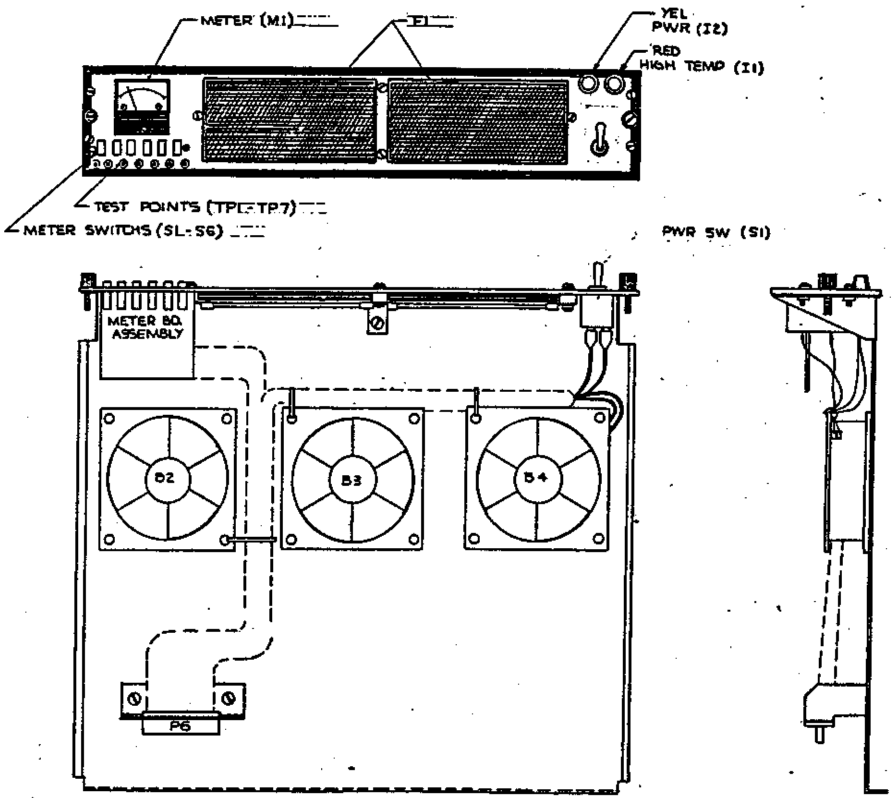
1. UNPLUG POWER CORD
2. UNSCREW BLOWER FRONT PANEL JACKING SCREWS (SEE CALLOUT.)
3. PULL BLOWER TRAY OUT.

TO INSTALL BLOWER:

1. UNPLUG POWER CORD.
2. PUSH BLOWER TRAY INTO GROOVES AS SHOWN.
3. TIGHTEN JACKING SCREWS INTO CRATE.
4. PLUG IN POWER CORD.

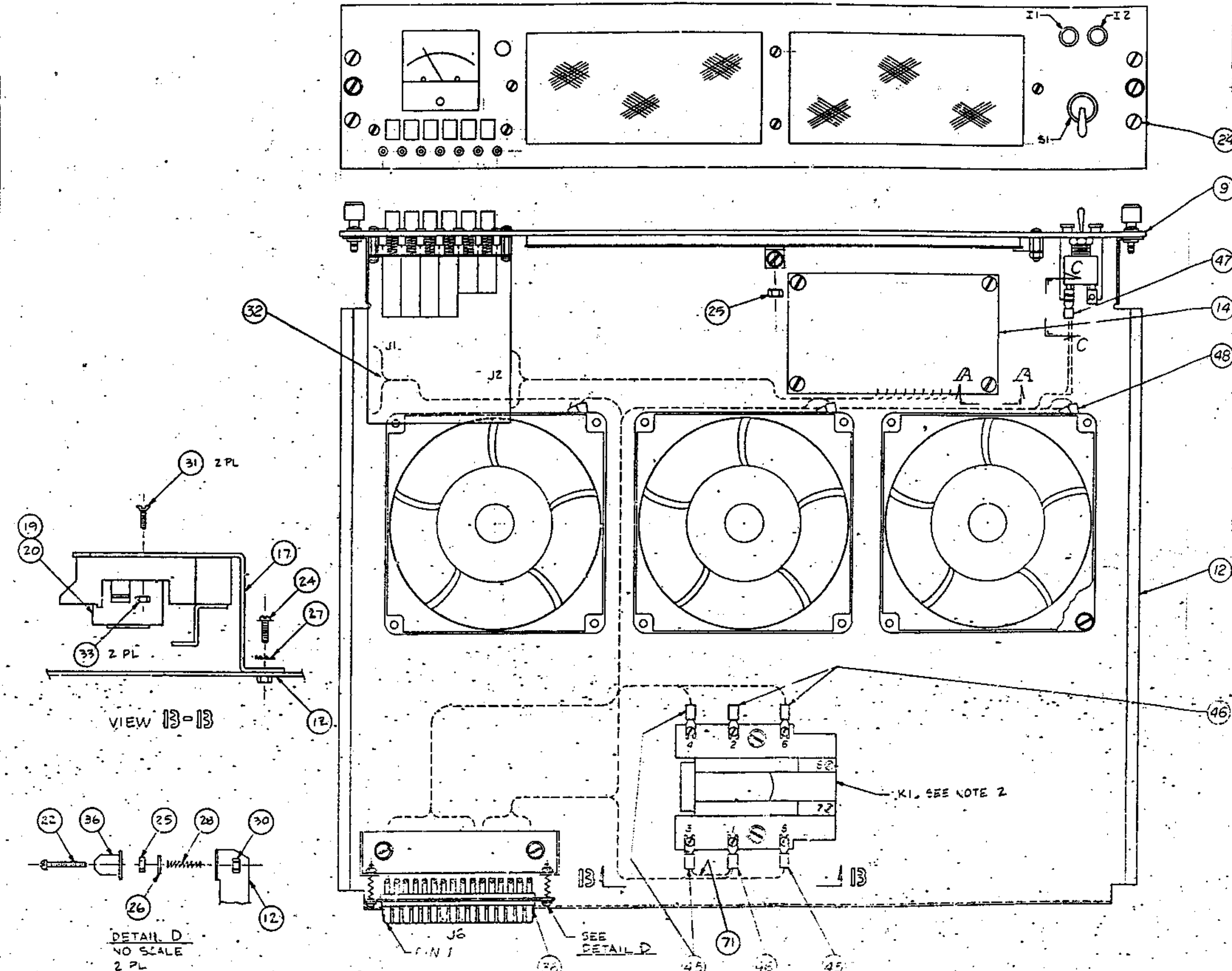
TITLE BLOWER REMOVAL DIAGRAM CAMAC SERIES				DSP Technology		
DESIGN		DATE	11-5-79	SIZE	DRAWING NUMBER	ISSUE
DRAWN	FRANK	DATE	9-21-79	D	105813	B
CHECK		DATE	11-5-79			
APPRO		DATE		SHEET 1 OF 1		

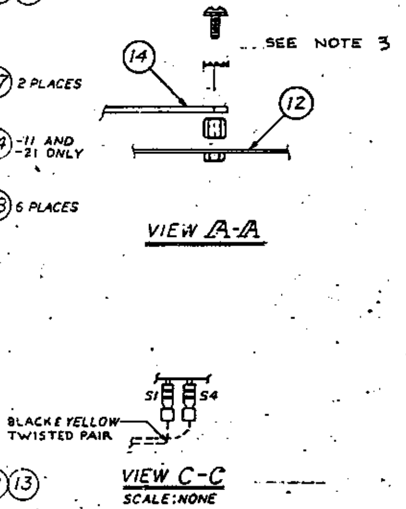
REVISIONS				
LTR	DESCRIPTION	BY	APPROVAL	DATE
1	PROTO RELEASE			
2	PROTOTYPE	eeh		
A	PRODUCTION RELEASE			[illegible]
A1	ECO 427 - DWG REINSTATED			[illegible]
B	ECO = 518			[illegible]



TITLE BLOWER, MAJOR COMPONENT DIAGRAM CAMAC SERIES				DSP Technology		
DESIGN		DATE	[illegible]	SIZE	DRAWING NUMBER	ISSUE
DRAWN	FRANK	DATE	[illegible]	D	106829	B
CHECK		DATE	[illegible]			
APPRO		DATE	[illegible]	SHEET 1 OF 1		

ZONE	LTR	DESCRIPTION	DATE	APPROVED
	A	RELEASE	5-12-82	[illegible]
	A_1	ECO 454	3-9-83	[illegible]
	A_2	ECO # 516	[illegible]	[illegible]
	B	ECO 533	9/4/84	[illegible]
	C	ECO 590	7/8/85	[illegible]





NOTES

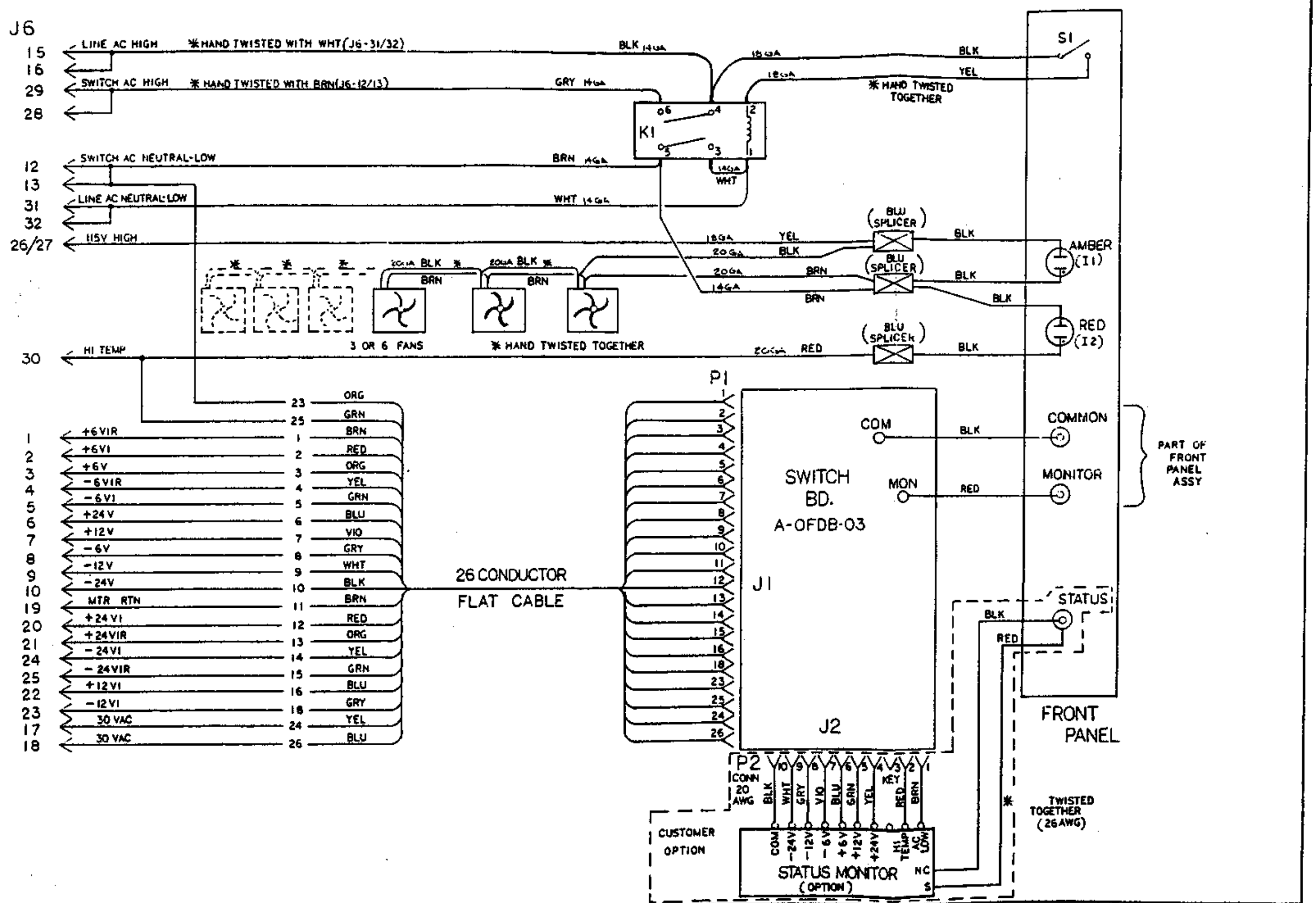
1. SEE WIRE LIST [illegible] FOR WIRING DETAIL & SCHEMATIC [illegible]
2. RELAY IS SHOWN INVERTED. ATTACH HARNESS TO RELAY BEFORE MOUNTING BRACKET TO CHASSIS.
3. SCREW, WASHER AND SPACER [illegible] PART OF STATUS BOARD [illegible]

TITLE ASSY, FINAL BLOWER

CAMAC

DESIGN		DATE	
DRAWN		DATE	
CHECK		DATE	
APPVD		DATE	

8 7 6 5 4 3 2



SYM	DESCRIPTION	DATE	APPROVAL
A	PRODUCTION RELEASE		

REVISIONS

MATERIAL

HEAT TREAT

WEIGHT

MISC.

FINISH

DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED

DECIMAL: XX ± —, XXX ± —; ANG. ± —

SCALE — NO REQ'D —

NEXT ASS'Y

TITLE: SCHEMATIC: BLOWER CHASSIS 115V

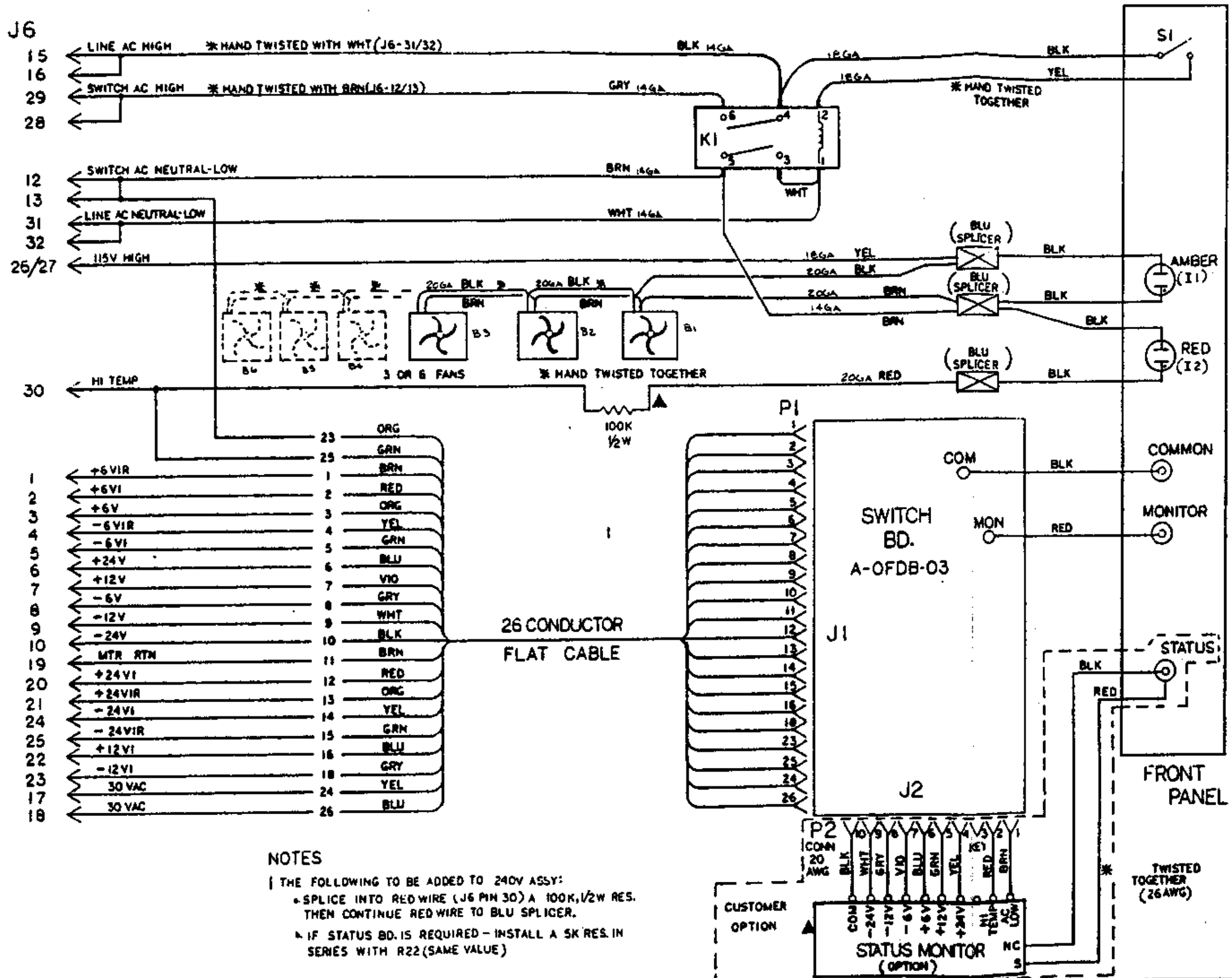
dsp Technology

DESIGN		DATE	
DETAIL	C. RUIGOMEZ	DATE	8-6-86
CHECK		DATE	
APPRO		DATE	

JOB NO.

SIZE	DRAWING NUMBER	ISSUE
C	A-OFDB-SD	A

SHT 1 OF 2



NOTES

1 THE FOLLOWING TO BE ADDED TO 240V ASSY:
- ▲ SPLICE INTO RED WIRE (J6 PIN 30) A 100K, 1/2W RES. THEN CONTINUE RED WIRE TO BLU SPLICER.
- ▲ IF STATUS BD. IS REQUIRED - INSTALL A 5K RES. IN SERIES WITH R22 (SAME VALUE)

SYM	DESCRIPTION	DATE	APPROVAL
A	PRODUCTION RELEASE		

REVISIONS

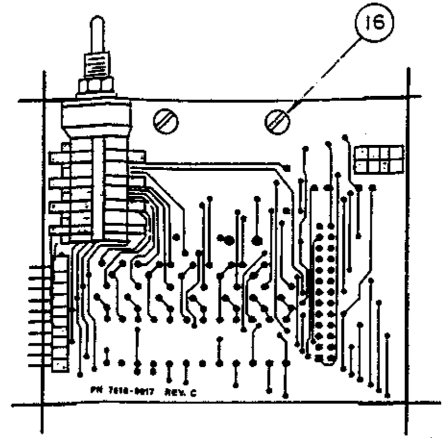
TITLE: SCHEMATIC: BLOWER CHASSIS 240V

dsp Technology

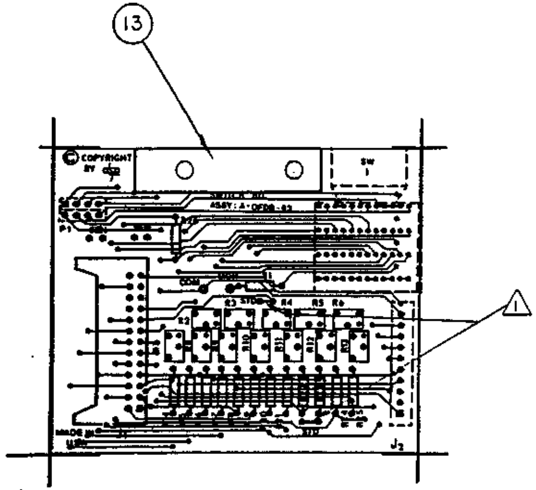
DETAIL: C. RUIGOMEZ DATE 8-6-86

SIZE: C DRAWING NUMBER: A-OFDB-SD ISSUE: A

SHT. 2 OF 2



SOLDER SIDE



COMPONENT SIDE

NOTES:

1. JUMPER AS SHOWN FOR STANDARD POSITION USING 26 AWG BUS WIRE (2PLCS)

SYM	DESCRIPTION	DATE	APPROVAL
C	REDESIGNED RELEASE		

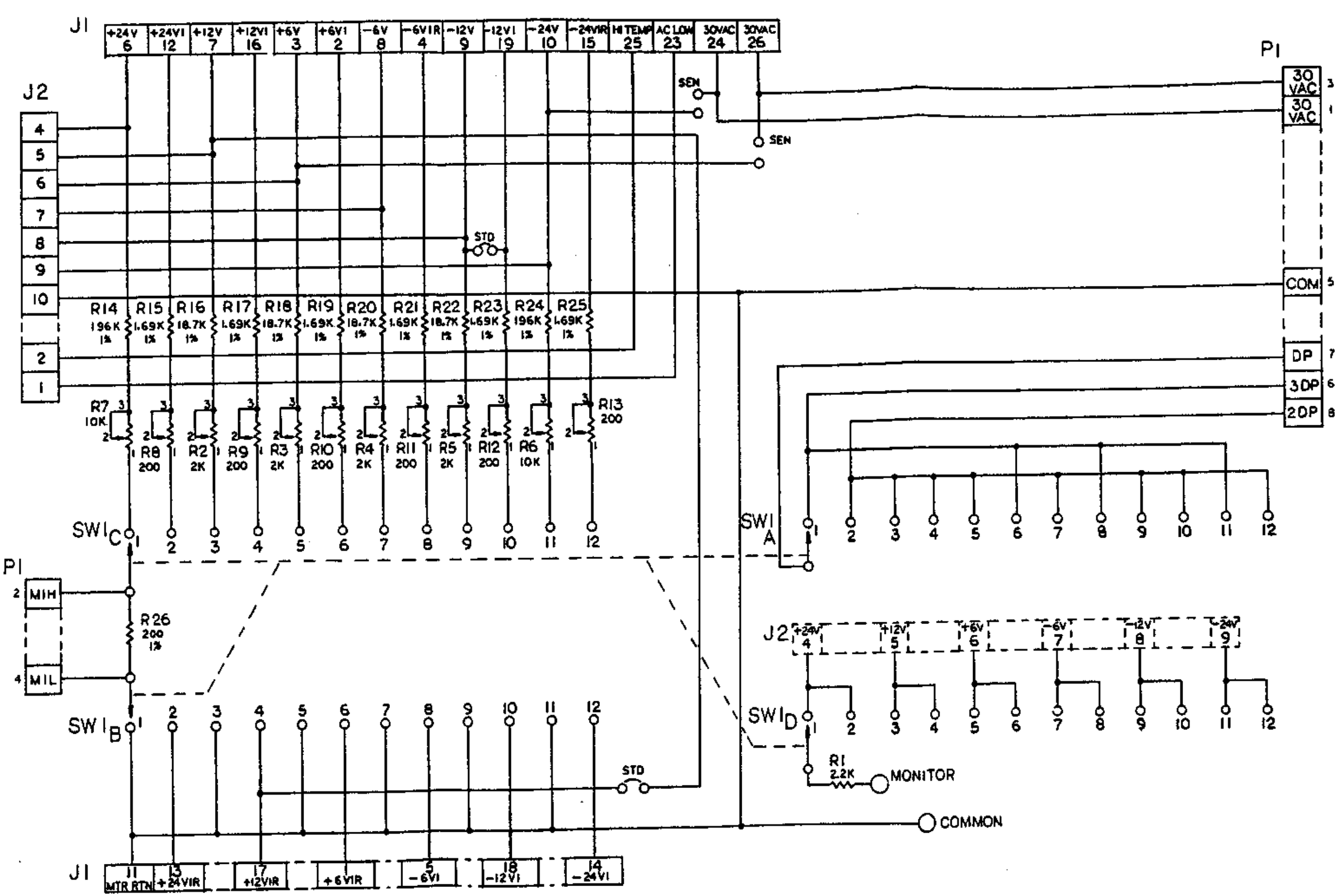
REVISIONS

MATERIAL	—
HEAT TREAT	
WEIGHT	
MISC.	
FINISH	—
DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED	DECIMAL .XX ± — .XXX ± —; ANG. ± —
SCALE	—
NO REQ'D	—
NEXT ASS'Y	

TITLE	ASSY: SWITCH BD. (STANDARD)		
DESIGN		DATE	
DETAIL	C. RUIGOMEZ	DATE	11-4-86
CHECK		DATE	
APPRO		DATE	

DSP TECH

JOB NO.		
SIZE	DRAWING NUMBER	ISSUE
C	A-OFDB-03-AD	C



SYM	DESCRIPTION	DATE	APPROVAL
C	REDESIGN RELEASE		
B	REDESIGN RELEASE		
A	RELEASE		

REVISIONS

MATERIAL —
HEAT TREAT
WEIGHT
MISC.

FINISH —
DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED
DECIMAL: XX ± — XXX ± — ANG. ± —
SCALE — NO REQ'D
NEXT ASS'Y

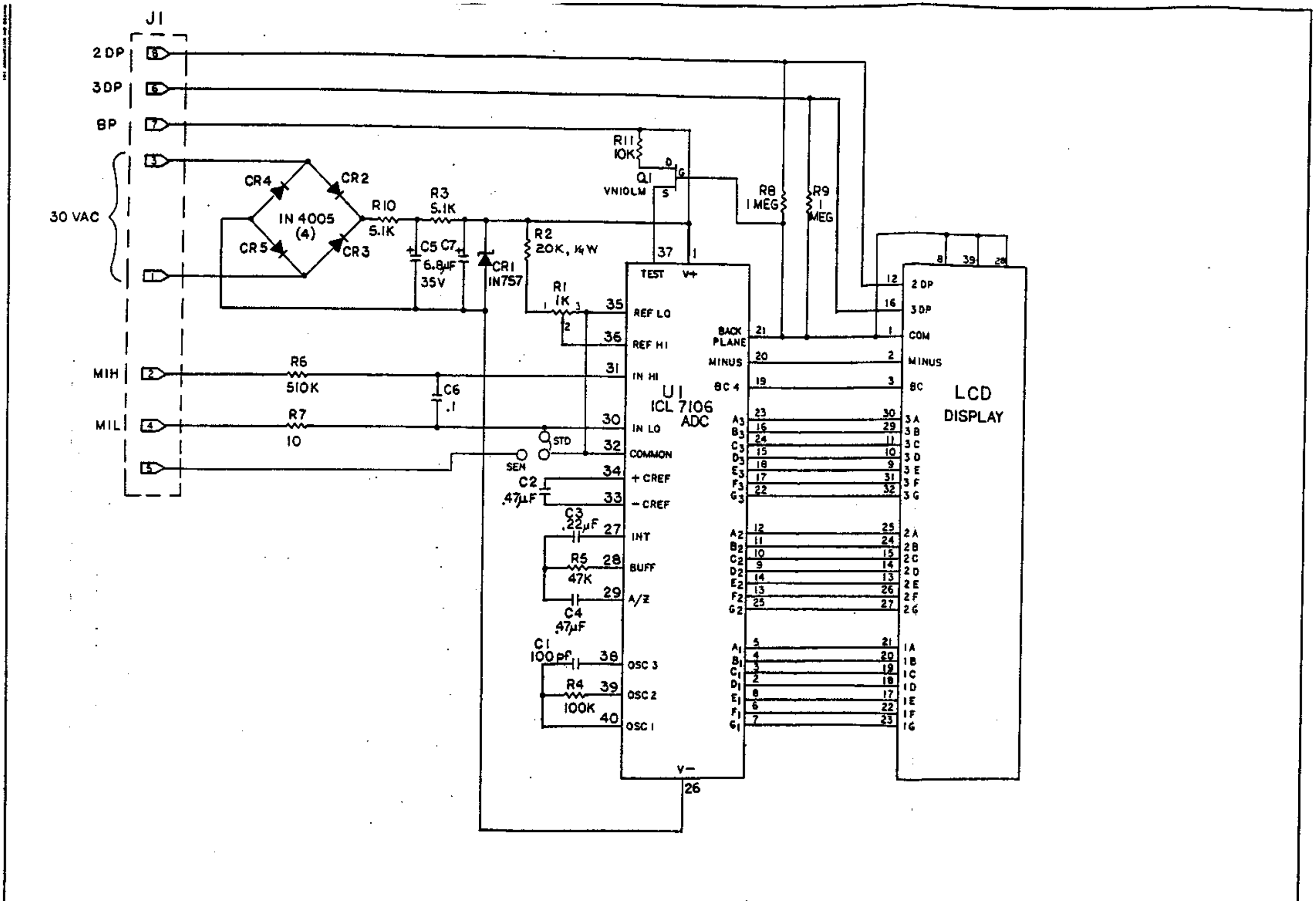
TITLE SCHEMATIC :
SWITCH BOARD
A-OFDB-03 (STANDARD)

DSP TECH

DESIGN		DATE	
DETAIL	C. RUIGOMEZ	DATE	8-1-86
CHECK		DATE	
APPRO		DATE	

JOB NO.

SIZE	DRAWING NUMBER	ISSUE
C	A-OFDB-03SD	C



MATERIAL	FINISH	TITLE SCHEMATIC: DISPLAY BOARD A-OFDB-02 (STANDARD)	DSP TECH
HEAT TREAT	DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED		
WEIGHT	DECIMAL / ANG.		
MISC.	SCALE / NO REQ'D		
	NEXT ASSY		

SYM	DESCRIPTION	DATE	APPROVAL
C	SEE ECO # 1003	9-11-[illegible]	[illegible]
C	ECO # 1002	7-2-87	[illegible]
A	PRODUCTION RELEASE		

REVISIONS

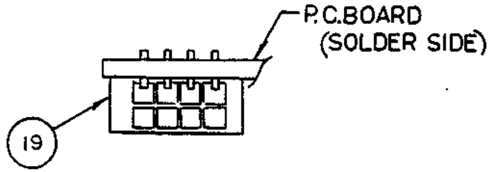
DESIGN		DATE		JOB NO.	
DETAIL	C. RUSOMER	DATE	7-30-86	SIZE	C
CHECK		DATE		DRAWING NUMBER	A-OFDB-02-SD
APPRO	[illegible]	DATE	1-20-87	ISSUE	C

NOTES:

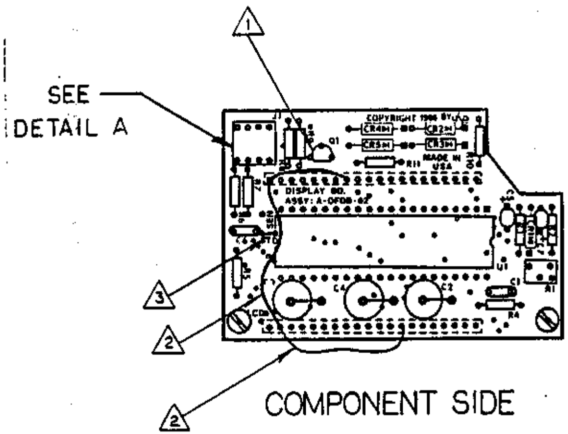
1. SILKSCREEN IS WRONG-INSTALL Q1 WITH FLAT SIDE TOWARD TOP OF BOARD.

2. ADD JUMPERS AS SHOWN:
   LCD-PIN 8 TO PIN 1
   PIN 1 TO PIN 39
   PIN 28 TO PIN 39
   USE 30 AWG KYNAR WIRE.

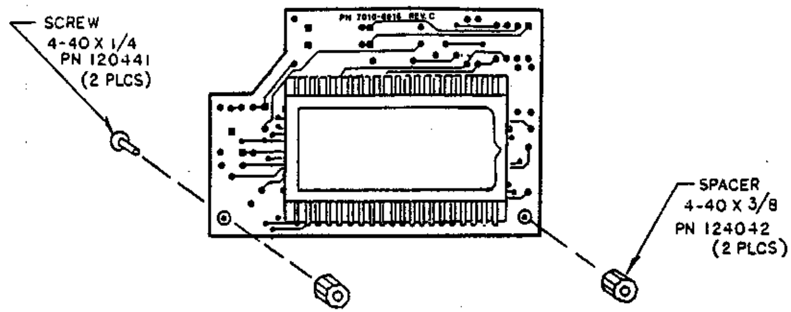
3. JUMPER AS SHOWN FOR STANDARD POSITION USING 26 AWG BUS WIRE.



DETAIL A



COMPONENT SIDE



SOLDER SIDE

SYM	DESCRIPTION	DATE	APPROVAL
C	SEE #CO # 1003	9-11-87	
C	REDESIGNED / ECO 665		
B	REDESIGNED		
A			

REVISIONS

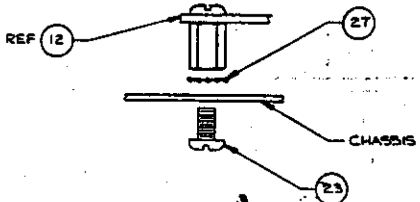
MATERIAL	—
HEAT TREAT	
WEIGHT	
MISC.	
FINISH	—
DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED	DECIMAL .XX± — .XXX± — ; ANG. ± —
SCALE	—
NO REQ'D	—
NEXT ASSY	

TITLE	ASSY: DISPLAY BD. (STANDARD)		
DESIGN		DATE	
DETAIL	C. RUIGOMEZ	DATE	11-4-86
CHECK		DATE	
APPRO		DATE	1/20/87

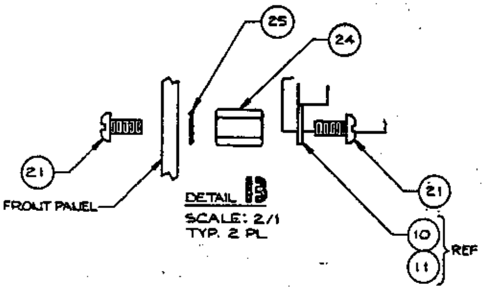
DSP TECH

JOB NO.		
SIZE	DRAWING NUMBER	ISSUE
C	A-0FDB-02-AD	C

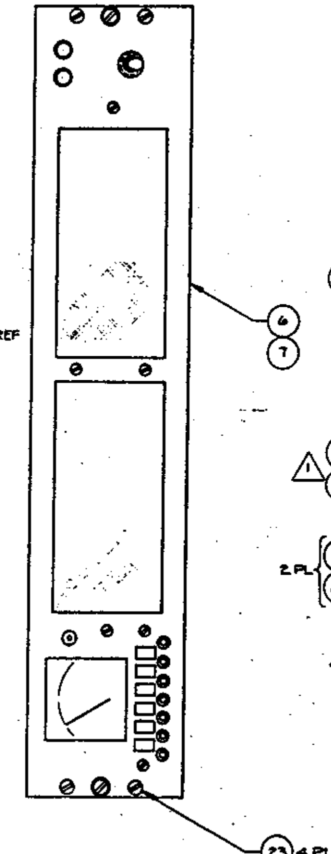
ZONE	LTR	REVISIONS DESCRIPTION	DATE	APPROVED
—	A	PRODUCTION RELEASE	4-6-84	

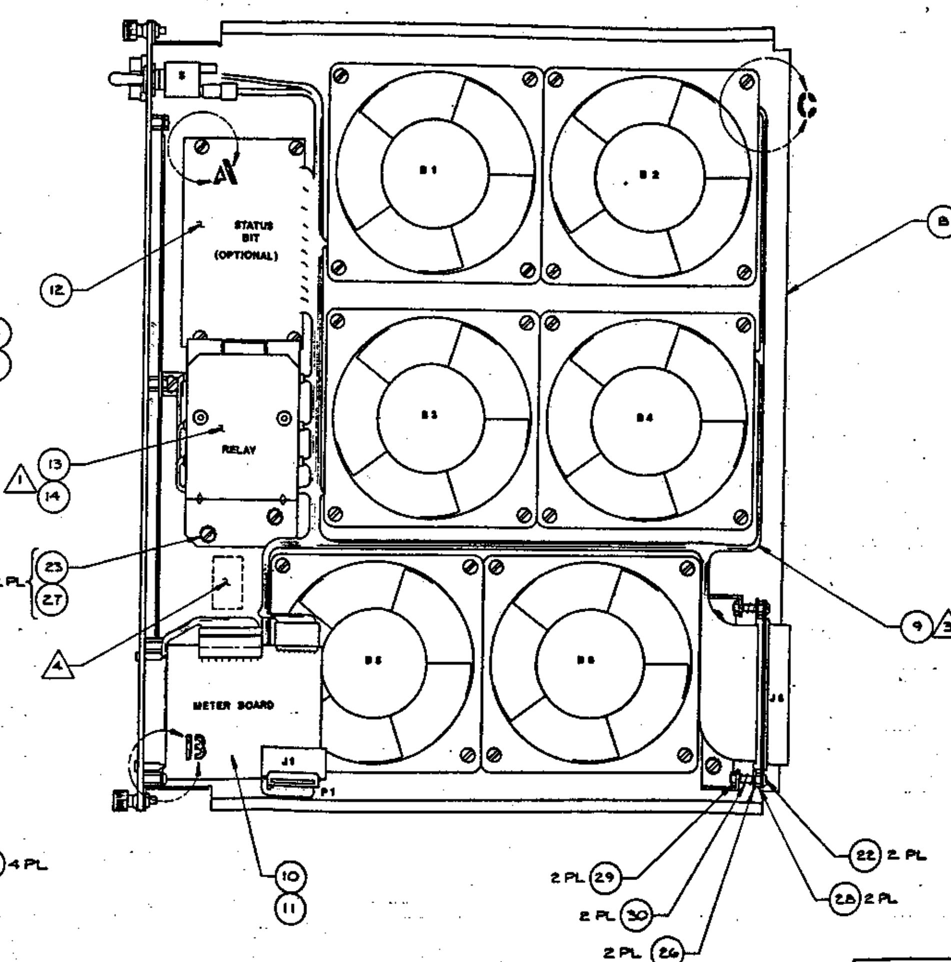


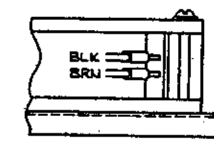
DETAIL A
SCALE: 2/1
TYP. 4 PL



DETAIL B
SCALE: 2/1
TYP. 2 PL







DETAIL C
SCALE: 1/1
TYP. 6 PL

NOTES: (UNLESS OTHERWISE SPECIFIED)

1. INSTALL ELECTRICAL CONNECTIONS PRIOR TO INSTALLING RELAY.
2. ALL ELECTRICAL CONNECTIONS TO BE MADE PER WIRE LIST NO. WL150561 AND SCHEMATIC DWG. NO. SD280006.
3. USE CABLE TIES AS NEEDED TO SECURE HARNESS WHERE APPROPRIATE.
4. PERMANENT MARK PART NO. AND LATEST REVISION LETTER APPROXIMATELY WHERE SHOWN.

TITLE: ASSEMBLY, BLOWER FINAL

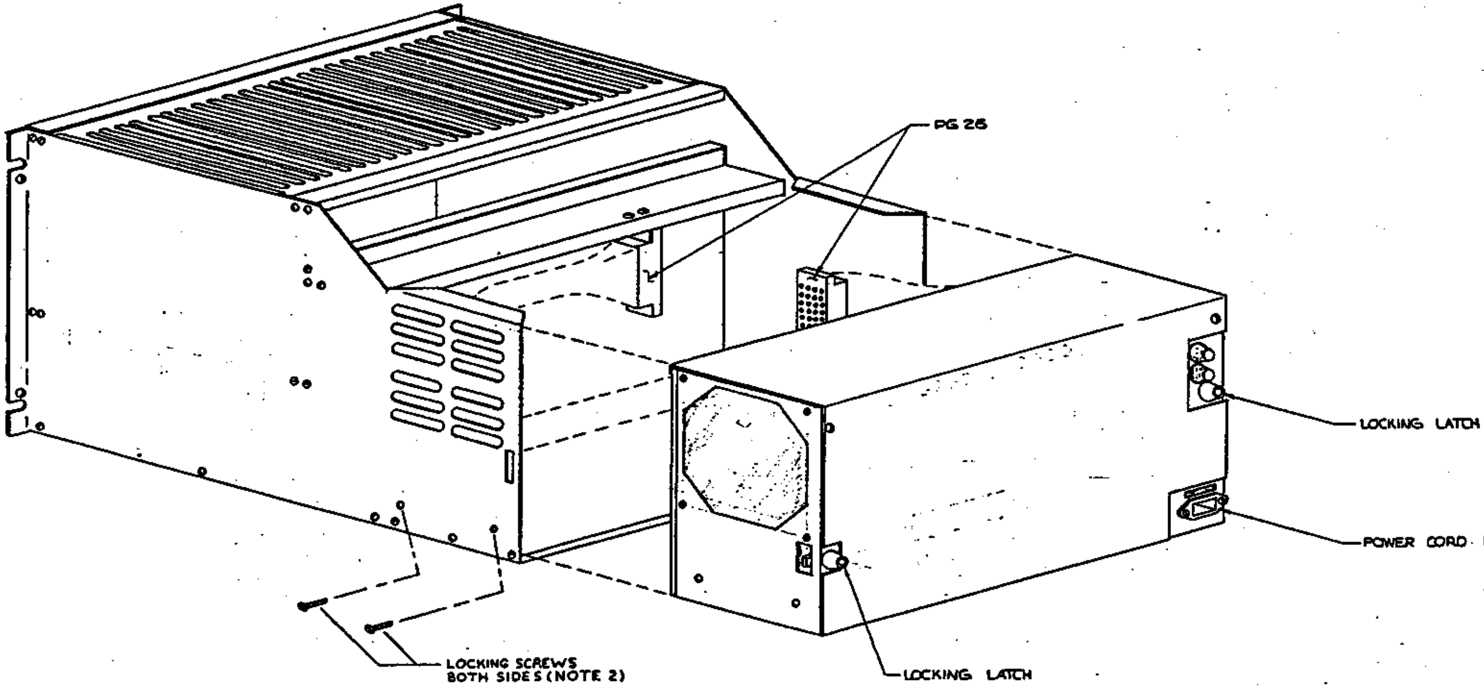
DSP Technology

DESIGN		DATE	5-29-84	SIZE	DRAWING NUMBER	REV
DRAWN		DATE		D	280006	A
CHECK		DATE				
APPVD		DATE	4-6-84	SCALE NONE	SHEET 1 OF 1	

8 7 6 5 4 3 2 1

REVISIONS

LTR	DESCRIPTION	BY	APPROVAL	DATE
1	PROTO RELEASE			
A	PRODUCTION RELEASE		[illegible]	[illegible]
A1	RELEASE PER ECN 1003	ech	[illegible]	7-13-81
B	ECO 453		V.O.Z.	9-6-85
C	REVISED PER ECO # 518		R. [illegible]	9-6-84



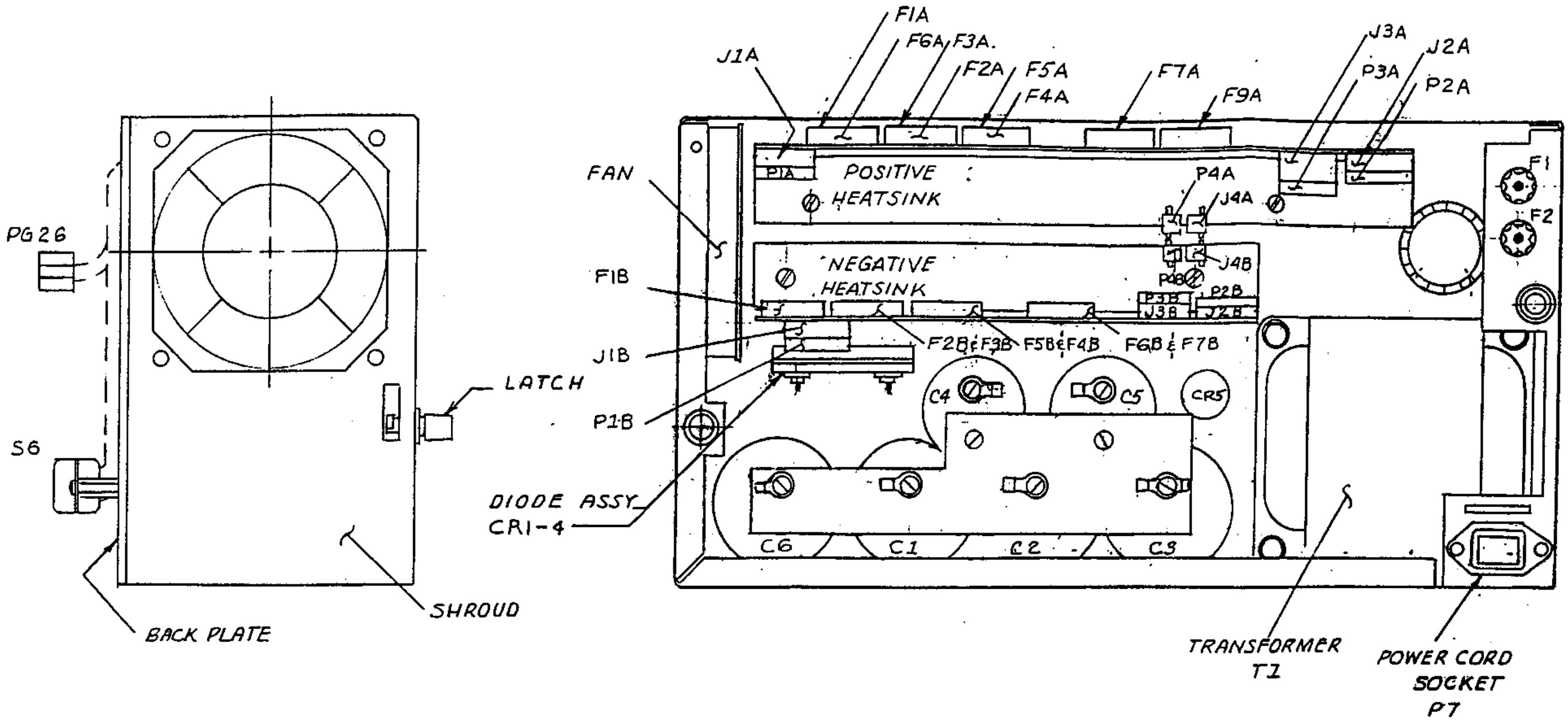
TO REMOVE POWER SUPPLY :

1. UNPLUG POWER CORD.
2. REMOVE THE 4 LOCKING SCREWS - HOLDING PS TO CRATE SIDES.
3. RELEASE POWER SUPPLY LOCKING LATCHES UNTIL LATCH ARMS DIS- ENGAGE CRATE.
4. PULL POWER SUPPLY OUT UNTIL SUFFICENT ROOM IS AVAILABLE TO DISCONNECT PG-26
   CAUTION: DO NOT PULL POWER SUPPLY TO FAR OUT.
5. DISCONNECT PG-26
6. PULL POWER SUPPLY OUT FROM SUPPORTING SHELF.

TO INSTALL:

1. REVERSE ABOVE PROCEDURE. BE SURE TO TIGHTEN LOCKING LATCHES SECURELY.

TITLE POWER SUPPLY REMOVAL DIAGRAM CAMAC SERIES				DSP Technology		
DESIGN	[illegible]	DATE	11-5-79	SIZE	DRAWING NUMBER	ISSUE
DRAWN	FRANK	DATE	5-24-79	D	106616	C
CHECK	TU	DATE	11-5-79			
APPRO	[illegible]	DATE	[illegible]	SHEET	1 OF 1	



SYM	DESCRIPTION	DATE	APPROVAL
B	ECO # 518	4-6-84	
A1	MANUAL UPDATE, ECO 427	8-15-83	
A	RELEASE	7-14-81	

REVISIONS

FINISH

DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED

DECIMAL		ANG.
XX±.	XXX±.	±

SCALE: | NO. REQ'D.

NEXT ASS'Y.

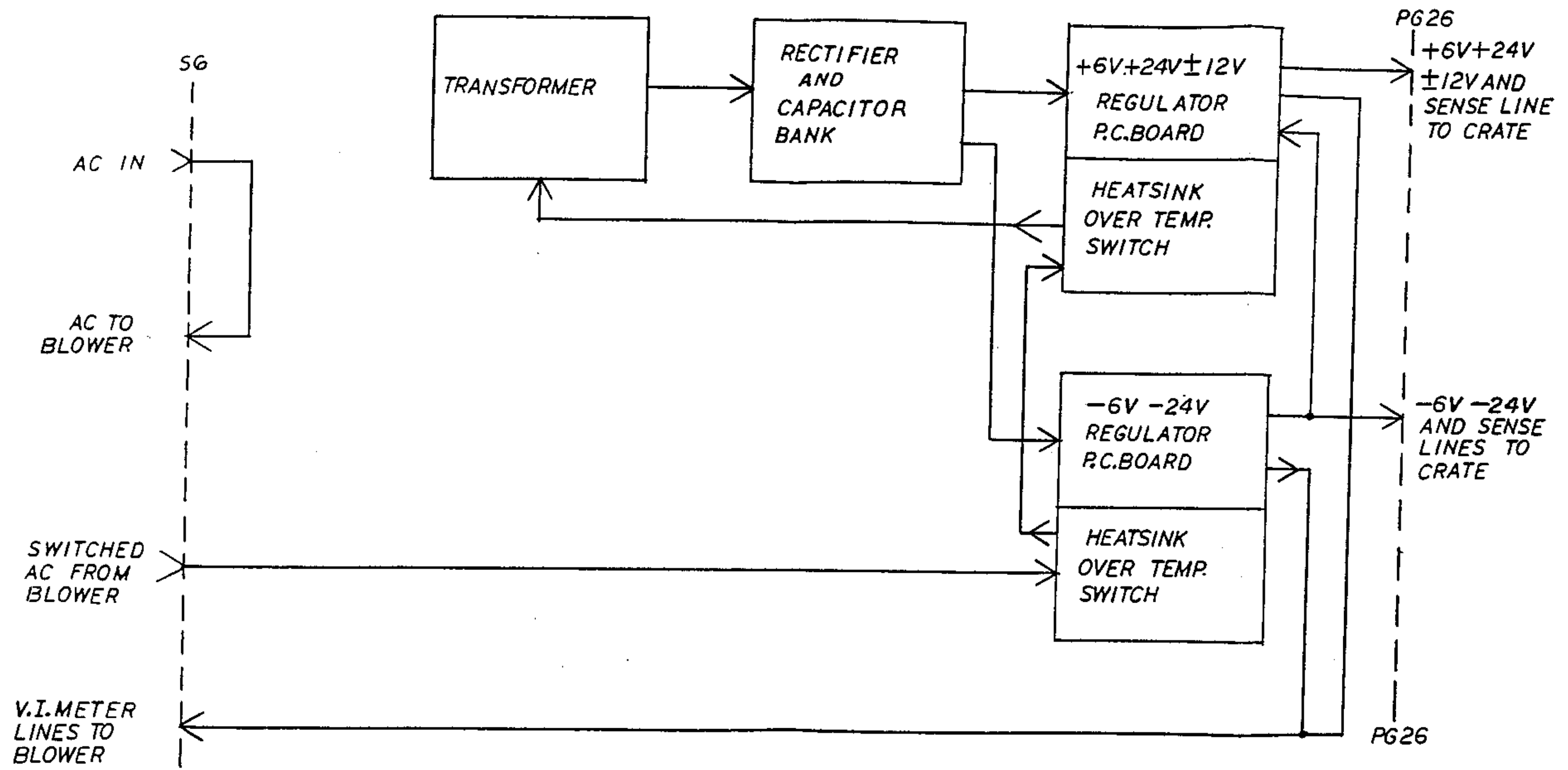
TITLE
MAJOR COMPONENT DIAGRAM CAMAC POWER SUPPLY

DESIGN		DATE	
DRAWN	m. Lamboy	DATE	6-24-81
CHECK		DATE	7/14/81
APPRO		DATE	7 [illegible]

DSP Technology

SIZE	DRAWING NUMBER	ISSUE
B	MD[illegible]	B

SHEET



SYM	DESCRIPTION	DATE	APPROVAL
C	ECO # 518	4-6-84	
B1	MANUAL UPDATE, ECO 427	8-15-83	
B	PER DCO 009	6-1-82	
A	RELESE	7-14-81	

REVISIONS

FINISH

DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED
DECIMAL: XX±. XXX±. ANG. ±
SCALE: NO. REQ'D.
NEXT ASS'Y.

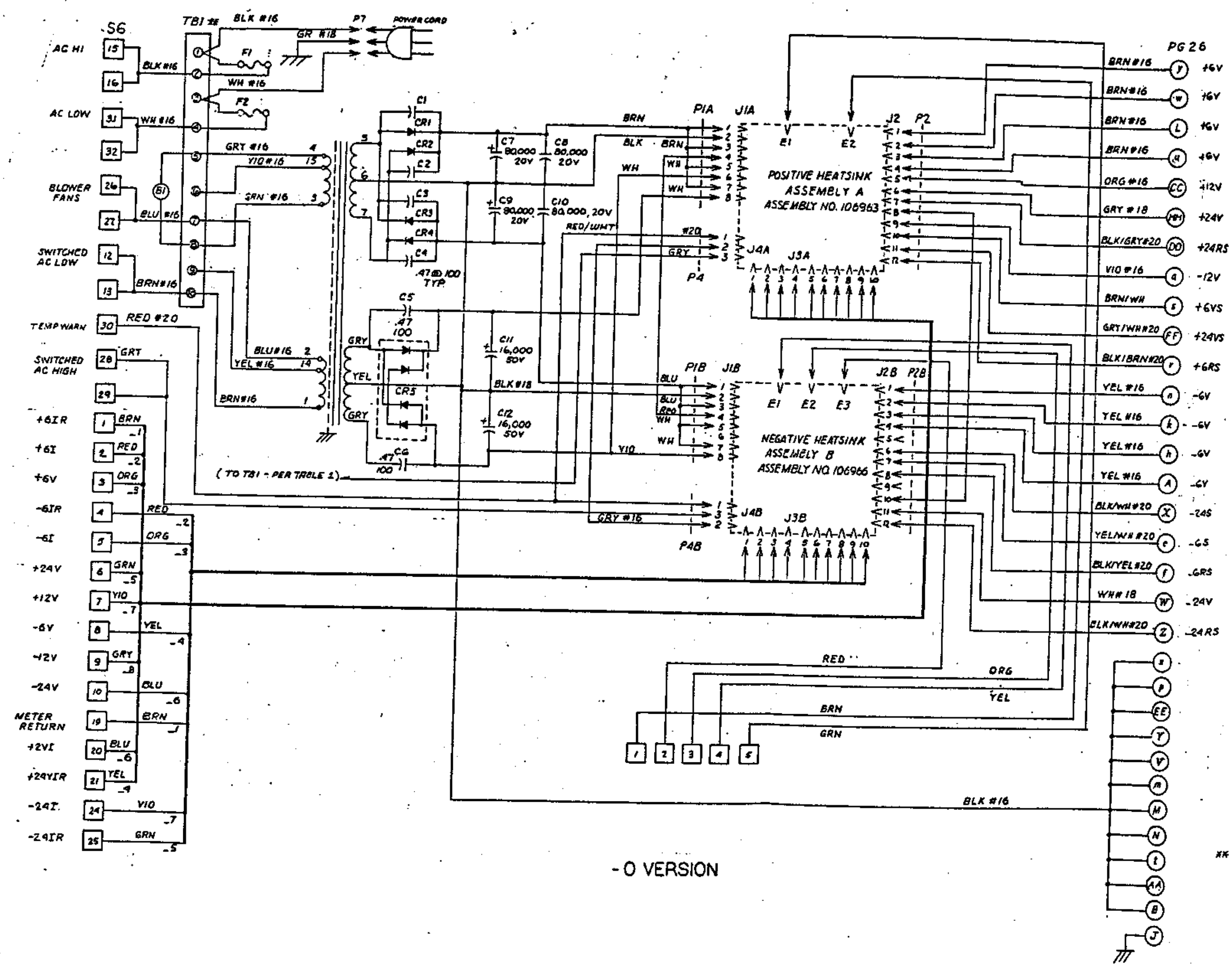
TITLE BLOCK DIAGRAM CAMAC POWER SUPPLY

DSP Technology

DESIGN		DATE	
DRAWN		DATE	6-9-81
CHECK		DATE	7-14-81
APPRO		DATE	2-25-81

SIZE: B
DRAWING NUMBER: BD106960
ISSUE: C
SHEET 1 OF 7

ZONE	LTR	DESCRIPTION	DATE	APPROVED
	A	Production Release		
	B	ECN # 1013		
	B.	DRAWING ERROR	5-27-82	
	C	PER DCO 009	6-1-82	
	C1	SEE ECO # 0258	3-17-83	
	D	ECO 381 ADDED SHEET 2	6-16-83	
	D1	REVISED PER ECO # 518	4-6-91	



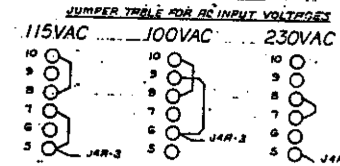
- O VERSION

3. FOR ADDITIONAL NOTES / -1 VERSION SEE SHT 2.
2. CR1 CR2 CR3 & CR4 MAY BE REPLACED BY PACKAGED BRIDGE RECTIFER AT OPTION OF FACTORY.
1. C1 AND C2 ARE FACTORY OPTIONAL.

NOTE:

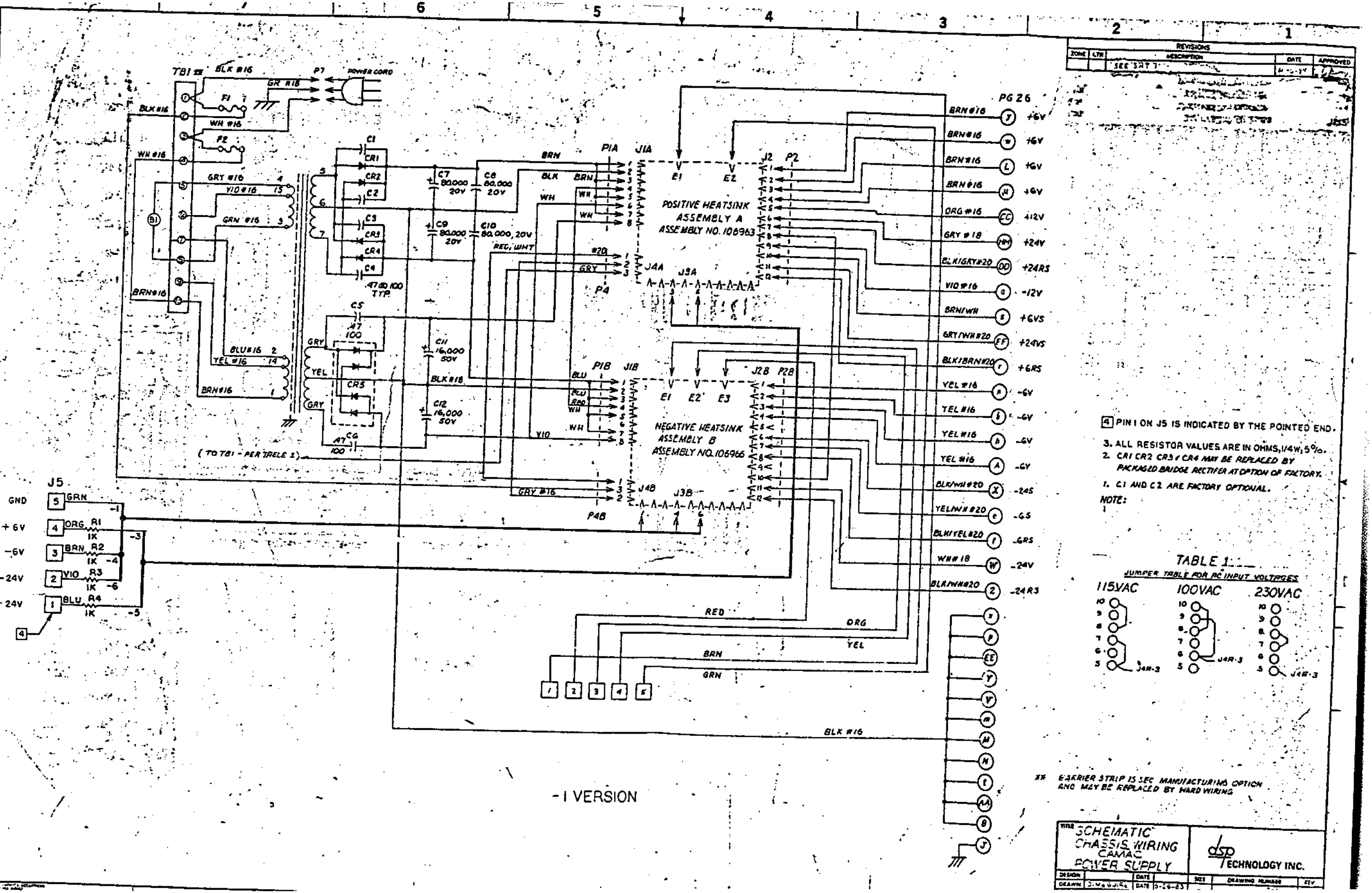
TABLE 1

JUMPER TABLE FOR AC INPUT VOLTAGES

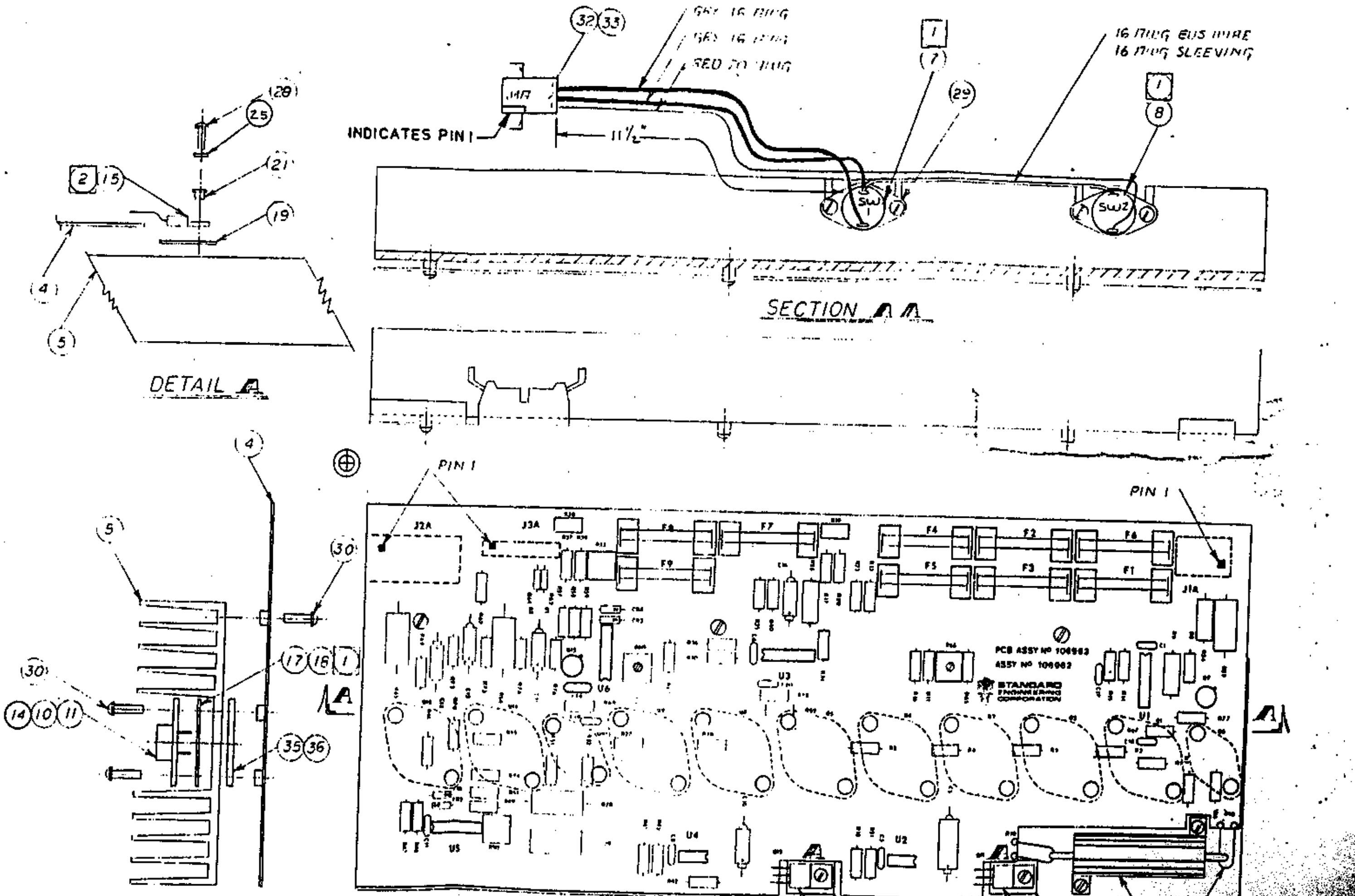


** BARRIER STRIP IS SEC MANUFACTURING OPTION AND MAY BE REPLACED BY HARD WIRING

TITLE SCHEMATIC CHASSIS WIRING CAMAC POWER SUPPLY				dsp TECHNOLOGY INC.		
DESIGN		DATE		SIZE	DRAWING NUMBER	REV
DRAWN		DATE	3-3-81	D	SD106961	D1
CHECK	—	DATE				



REVISIONS
ZONE
LTR
DESCRIPTION
DATE
APPROVED
SEE SHT 1
TB1 **
BLK #16
GR #18
P7
POWER CORD
F1
F2
WH #16
GRY #16
VIO #16
GRN #16
B1
BRN #16
BLU #16
YEL #16
C1
CR1
CR2
C2
C3
CR3
CR4
C4
.47@100 TYP.
C5
.47 100
C6
.47 100
CR5
C7 80,000 20V
C8 80,000 20V
C9 80,000 20V
C10 80,000, 20V
C11 16,000 50V
C12 16,000 50V
RED, WHT
BLK #18
(TO TB1 - PER TABLE 1)
P1A
J1A
P1B
J1B
P4
J4A
J3A
P4B
J4B
J3B
J2
P2
J2B
P2B
E1
E2
E3
POSITIVE HEATSINK ASSEMBLY A ASSEMBLY NO. 106963
NEGATIVE HEATSINK ASSEMBLY B ASSEMBLY NO. 106966
PG 26
BRN #16 +6V
BRN #16 +6V
BRN #16 +6V
BRN #16 +6V
ORG #16 +12V
GRY #18 +24V
BLK/GRY #20 +24RS
VIO #16 -12V
BRN/WH +6VS
GRY/WH #20 +24VS
BLK/BRN #20 +6RS
YEL #16 -6V
YEL #16 -6V
YEL #16 -6V
YEL #16 -6V
BLK/WH #20 -24S
YEL/WH #20 -6S
BLK/YEL #20 -6RS
WH #18 -24V
BLK/WH #20 -24RS
RED
ORG
YEL
BRN
GRN
BLK #16
J5
GND
+6V
-6V
-24V
-24V
GRN
ORG
BRN
VIO
BLU
R1 1K
R2 1K
R3 1K
R4 1K
4 PIN 1 ON J5 IS INDICATED BY THE POINTED END.
3. ALL RESISTOR VALUES ARE IN OHMS, 1/4W, 5%.
2. CR1 CR2 CR3 & CR4 MAY BE REPLACED BY PACKAGED BRIDGE RECTIFIER AT OPTION OF FACTORY.
1. C1 AND C2 ARE FACTORY OPTIONAL.
NOTE:
TABLE 1
JUMPER TABLE FOR AC INPUT VOLTAGES
115VAC
100VAC
230VAC
J4R-3
** BARRIER STRIP IS SEC MANUFACTURING OPTION AND MAY BE REPLACED BY HARD WIRING
-1 VERSION
SCHEMATIC CHASSIS WIRING CAMAC POWER SUPPLY
dsp TECHNOLOGY INC.
DESIGN
DRAWN
DATE
SIZE
DRAWING NUMBER
REV



-1 VERSION 850 POWER SUPPLY
-2 VERSION 885 POWER SUPPLY

NOTES:

1. USE HEATSINK COMPOUND ON ITEMS 7-9, 14, 15, 17 & 18.
2. FORM LEADS TO LAY FLAT ON P.C.B.
3. ITEM 19 NOT TO EXTEND PAST EDGE OF HEATSINK.
4. -1 VERSION FOR Q1-Q5 USE 2N3771 ON 850 P/S.
   -2 VERSION FOR Q1-Q5 USE 2N5685 ON 885 P/S.

106984 REV D

SYM	DESCRIPTION	DATE	APPROVAL
D	ECO	4-6-91	
C3	ECO # 518	4-6-91	
C2	ECO 430	4-26-83	
C1	ADDED ITEM 14 PER ECO 222	9-30-82	
C	CHANGED PER ECO 218	7-29-82	
B	PRODUCTION RELEASE ECO	[illegible]	

REVISIONS

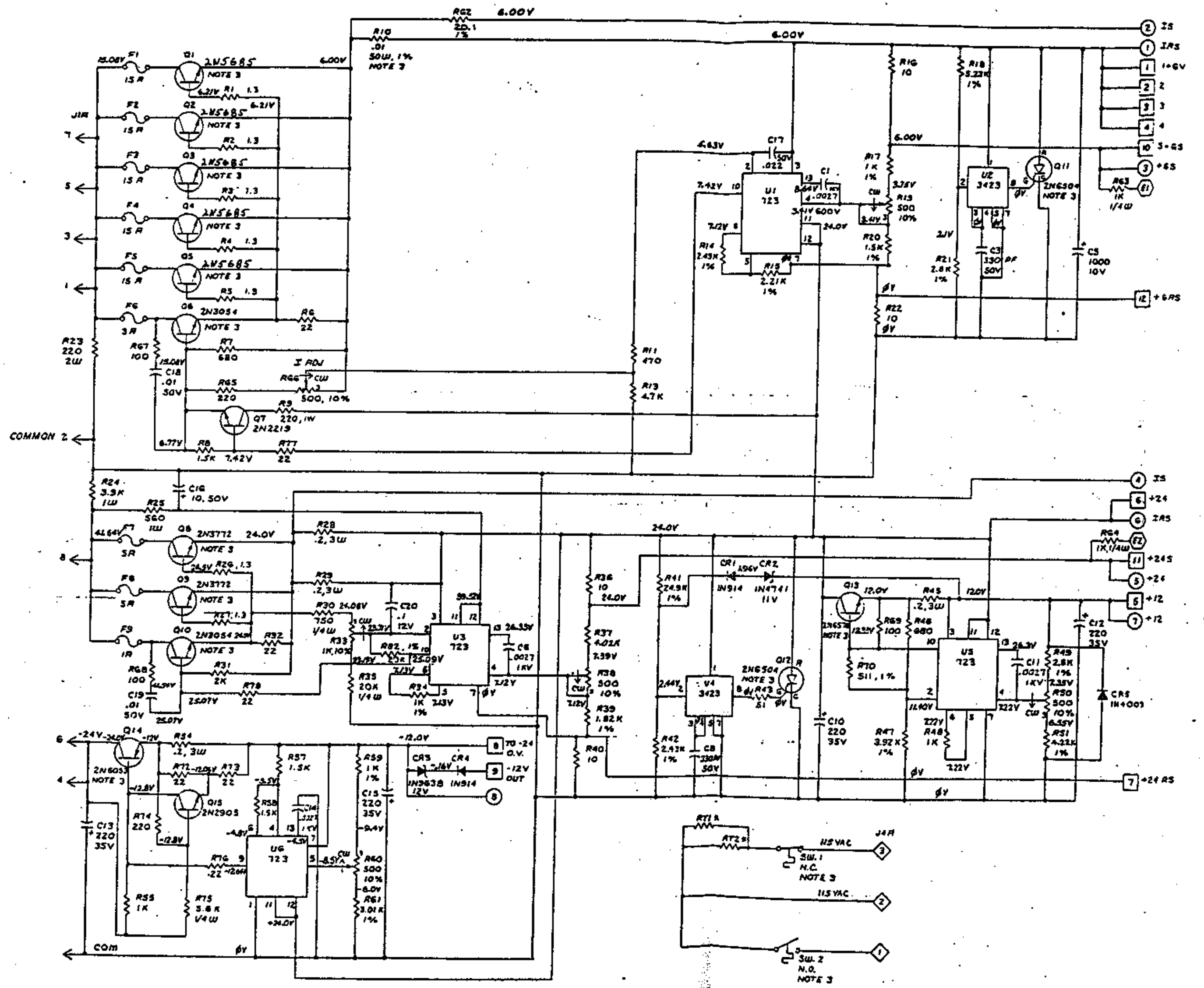
MATERIAL: SEE PARTS LIST PL 106962

FINISH: ~

DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED

TITLE: ASSEMBLY, POSITIVE HEATSINK POWER SUPPLY CAMAC

DESIGN | DATE
DRAWN | DATE
CHECK | DATE



REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
	B	PRODUCTION RELEASE	12-3-81	
	B1	ADD NOTE #6	4-26-82	
	C	RELEASE PER ECO 218	5-18-82	
	C1	CHANGED Q8/Q9 FROM 2N3771 TO 2N3772 PER ECO222	9-30-82	
	C2	CHANGED R37 VALUE FROM 4.2K TO 4.02K	11-9-82	
	C3	ADDED VOLTAGES & CONDITIONS	3-7-83	
	D	ECO 440	8-26-83	D.D.G.
	D1	ECO 451	9-6-83	D.D.G.
	D2	REVISED PER ECO # 521	4-16-84	

CONDITIONS: (OF TEST VOLTAGES SHOWN)

1. OUTPUT ADJUSTED TO 6.00V AND 24.00V.
2. NO LOAD ON OUTPUTS.
3. 115 VAC 60Hz INPUT.
4. ALL VOLTAGES WITH RESPECT TO COMMON.

NOTES: UNLESS OTHERWISE SPECIFIED

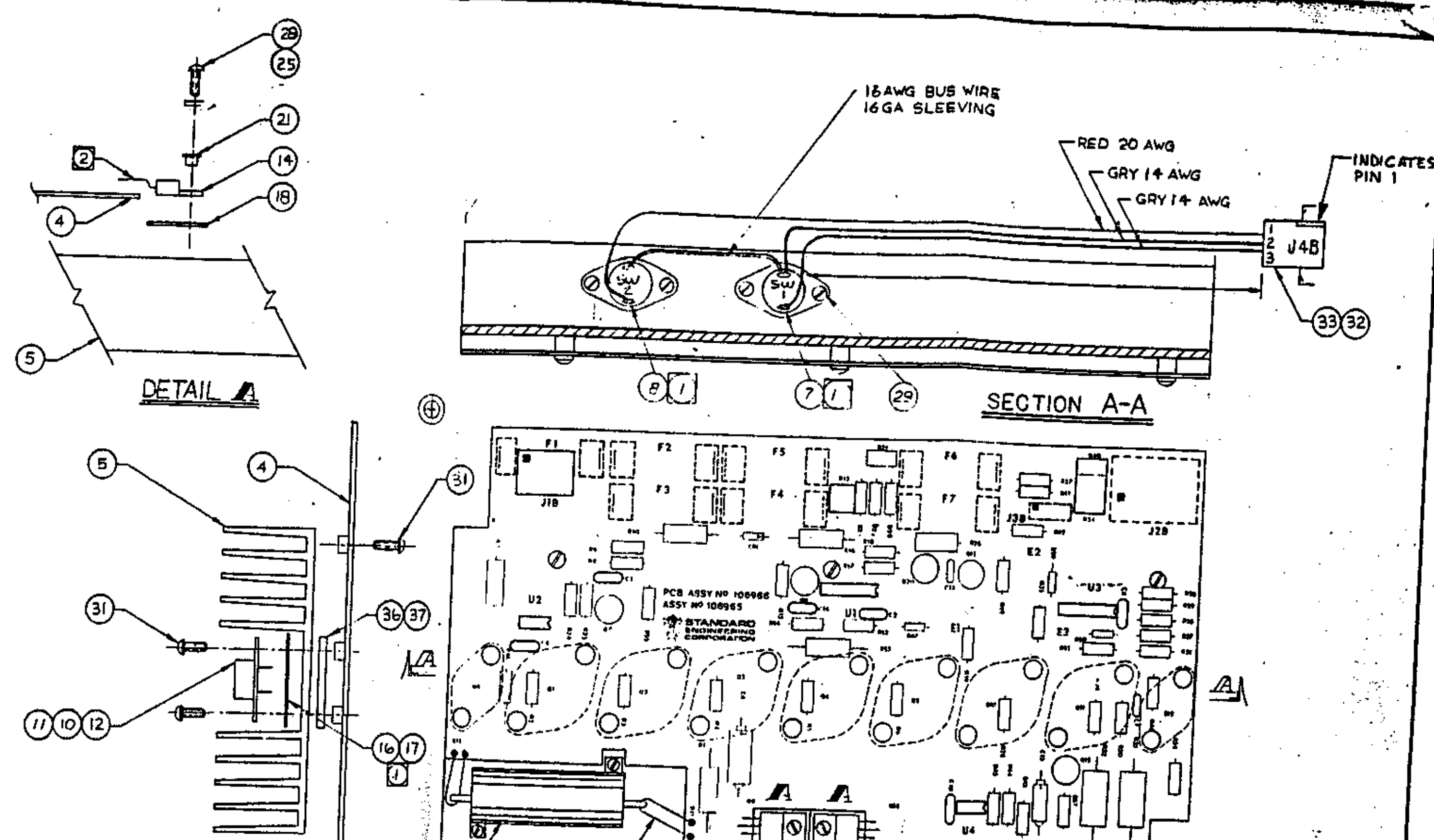
1. ALL RESISTORS ARE 1/2 W, 5% & VALUES ARE IN OHMS.
2. ALL CAPACITOR VALUES ARE IN MICRO FARADS.
3. COMPONENT IS MOUNTED DIRECTLY TO THE HEATSINK. SEE PARTS LIST PL106962.
4. ±12V CIRCUITS ARE OPTIONAL
5. > INDICATES J1A
   □ INDICATES J2A
   ○ INDICATES J3A
   ◇ INDICATES J4A
   ○ INDICATES WIRE WRAP PIN ON P.C.B.

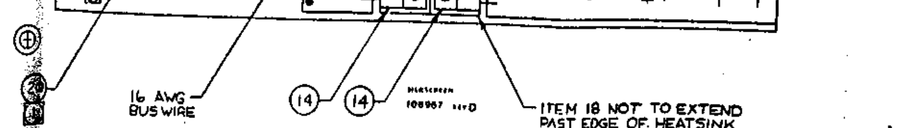
TITLE SCHEMATIC, REGULATOR, +6, +24 & ±12 Vdc

dsp TECHNOLOGY INC.

DESIGN		DATE		SIZE	DRAWING NUMBER	REV
DRAWN		DATE		D	SD106953	D2
CHECK		DATE				
APP'VD		DATE		SCALE —	SHEET 1 OF 1	

8 7 6 5 4 3 2 1





NOTES:

1. USE HEATSINK COMPOUND ON ITEMS 7,8, 14,16,17, &20.
2. FORM LEADS TO LAY FLAT ON P.C.B.
3. ■ INDICATES PIN 1
4. -1 VERSION FOR Q1-Q5 USE 2N3771 ON 850 P/S.
   -2 VERSION FOR Q1-Q5 USE 2N5685 ON 885 P/S.

-1VERSION 850 POWER SUPPLY
-2VERSION 885 POWER SUPPLY

SYM	DESCRIPTION	DATE	APPROVAL
D	ECO		
C4	ECO # 518	4-6-84	
C3	ECO 339		
C2	CHANGED QTY FROM 7 TO 5 ITEM	5-16-83	
C1	ADDED ITEM 11 PER ECO 222	9-30-82	
C	CHANGED PER ECO 219	7-29-82	
B	PRODUCTION RELEASE	12-2-81	
	REVISIONS		

MATERIAL: SEE PL106965

FINISH

DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED: DECIMAL .XX .XXX ANG

SCALE 1:1 NO REQ'D

NEXT ASSY 106981/280411

TITLE: ASSEMBLY, NEG. HEATSINK CAMAC

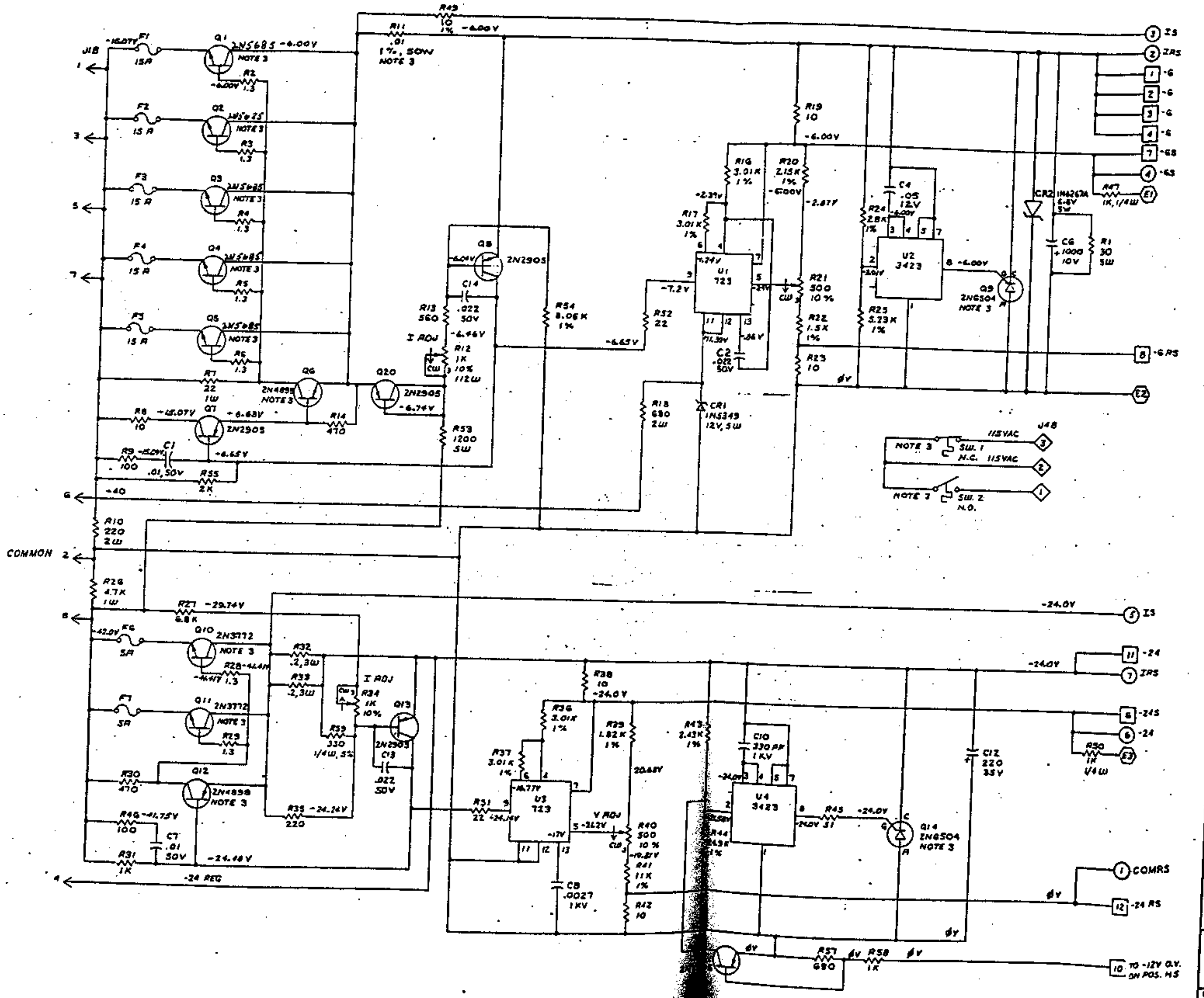
DESIGN | DATE

DRAWN C.C. bennett | DATE 12-2-81

CHECK | DATE

D S P TECHNOLOGY INC.

ZONE	LTR	REVISIONS DESCRIPTION	DATE	APPROVED
	B	PRODUCTION RELEASE ECO 203	12-3-81	
	C	RELEASE - SEE ECO #219	5-18-82	
	C1	CHANGED Q10 & Q11 FROM 2N3771 TO 2N3772 PER ECO 222	9-30-82	
	C2	ADDED VOLTAGES & CONDITIONS	3-7-83	
	D	ECN 1183 - ECO 385	6-21-83	
	D1	REVISED PER ECO#521	9-16-94	



CONDITIONS: (OF TEST VOLTAGES SHOWN)

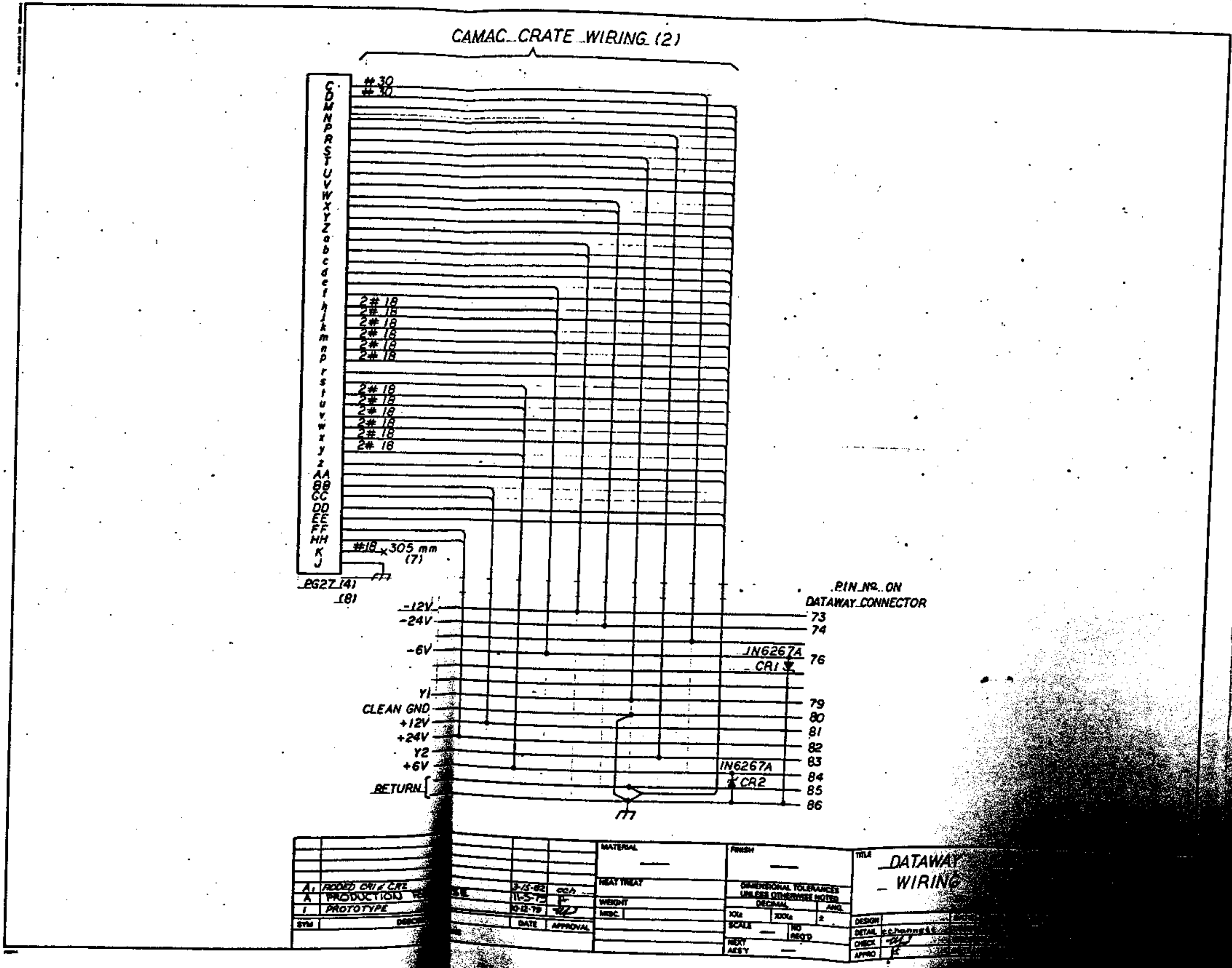
1. OUTPUTS ADJUSTED TO -6.00V AND -24.00 V.
2. NO LOADS ON OUTPUTS.
3. 115 VAC 60Hz INPUT.
4. ALL VOLTAGES WITH RESPECT TO COMMON.

NOTES: UNLESS OTHERWISE SPECIFIED

1. ALL RESISTORS ARE 1/2 W, 5% & VALUES ARE IN OHMS.
2. ALL CAPACITOR VALUES ARE IN MICRO FARADS.
3. COMPONENT IS MOUNTED DIRECTLY TO THE HEATSINK. SEE PARTS LIST PL106965.
4. > INDICATES J1B
   □ INDICATES J2B
   ○ INDICATES J3B
   ◇ INDICATES J4B
   ○ INDICATES WIRE WRAP PIN ON P.C.B.

TITLE SCHEMATIC, REGULATOR, -6 AND -24 Vdc

dsp TECHNOLOGY INC.


CAMAC CRATE WIRING (2)
C D M N P R S T U V W X Y Z a b c d e f h j k m n p r s t u v w x y z AA BB CC DD EE FF HH K J
#30
#30
2# 18
2# 18
2# 18
2# 18
2# 18
2# 18
2# 18
2# 18
2# 18
2# 18
2# 18
2# 18
#18 x 305 mm
(7)
PG27 (4)
(8)
PIN No ON DATAWAY CONNECTOR
-12V
-24V
-6V
Y1
CLEAN GND
+12V
+24V
Y2
+6V
RETURN
73
74
76
79
80
81
82
83
84
85
86
1N6267A
CR1
1N6267A
CR2
MATERIAL
FINISH
HEAT TREAT
WEIGHT
MISC.
DIMENSIONAL TOLERANCES UNLESS OTHERWISE NOTED
DECIMAL
ANG.
SCALE
NO REQ'D
NEXT ASS'Y
TITLE
DATAWAY
WIRING
DESIGN
DETAIL
CHECK
APPRO
A1 ADDED CR1 & CR2 3-15-82
A PRODUCTION 11-5-79
1 PROTOTYPE 10-12-79
SYM
DATE
APPROVAL

dsp Technology In

PRODUCT WARRANTY

(Excludes Software)

DSP TECHNOLOGY ("DSP") warrants its products to be free from defects in material and workmanship and to meet DSP's performance specifications. The warranty period is one year from the date of shipment to the buyer. The warranty is limited by the paragraphs below.

RETURN TO FACTORY

If a buyer discovers a defect in a DSP product covered by this agreement, buyer's exclusive remedy is to ship the product back to DSP's Fremont factory, where DSP will, at its option, either repair or replace the product. This remedy applies if DSP receives the returned product on or before the tenth day after the expiration of the warranty period and the buyer notifies DSP of the defect before returning the product.

COST TO BUYER OF REPAIRS OR REPLACEMENT

Buyer must prepay freight charges to DSP. DSP will pay standard return freight to buyer. Buyer will be charged for premium freight if that method of transport is requested by buyer. There is no other charge for repair or replacement during the warranty period.

TRANSFERRABLE WARRANTIES

In addition to the foregoing warranty, DSP also provides the buyer the transferrable warranty, if any, provided to DSP by the manufacturers of other products such as terminals and disk systems supplied by SEC as part of a total system.

LIMITATION OF WARRANTY AND LIABILITY

The foregoing constitutes DSP's entire warranty, expressed, implied, and/or statutory (except as to title), and to any other party for any breach of such warranty and for damages, whether direct, special, incidental, or consequential. Other than as expressly provided in this document, no warranties expressed or implied, including any warranty of merchantability or fitness for a particular purpose are made. No employee, representative, or agent or seller has any authority expressed or implied to alter or supplement the terms of this warranty.

DSP Technology, Inc. 48500 Kato Road, Fremont, CA 94538-7338 (415) 657-7555 TLX 283608